NOAA
R 224
OSCAR DYSON

REVISIONS				
REV	ZONE	DESCRIPTION	DATE	APPROVED

TABLE OF CONTENTS:

SHT 1: TITLE PAGE
SHT 2: TABLE OF CONTENTS & MISCELLANEOUS DATA
SHT 3: STARBOARD OUTBOARD PROFILE
SHT 4: PORT OUTBOARD PROFILE
SHT 5: INNERBOTTOM & TANKTOP PLAN VIEWS
SHT 6: 2ND DECK & MAIN DECK PLAN VIEWS
SHT 7: 01 LEVEL & 02 LEVEL PLAN VIEWS
SHT 8: 03 LEVEL & 04 LEVEL PLAN VIEWS
SHT 9: RIGGING, LIGHTING AND MISSION EQUIPMENT PLAN VIEWS
SHT 10: RIGGING, LIGHTING AND MISSION EQUIPMENT PLAN VIEWS (CONT'D)
SHT 11: RIGGING, LIGHTING AND MISSION EQUIPMENT PLAN VIEWS (CONT'D)
SHT 12: RIGGING, LIGHTING AND MISSION EQUIPMENT PLAN VIEWS (CONT'D)
SHT 13: RIGGING, LIGHTING AND MISSION EQUIPMENT PLAN VIEWS (CONT'D)
SHT 14: RIGGING, LIGHTING AND MISSION EQUIPMENT PLAN VIEWS (CONT'D)
SHT 15: RIGGING, LIGHTING AND MISSION EQUIPMENT PLAN VIEWS (CONT'D)
SHT 16: RIGGING, LIGHTING AND MISSION EQUIPMENT PLAN VIEWS (CONT'D)
SHT 17: RIGGING, LIGHTING AND MISSION EQUIPMENT PLAN VIEWS (CONT'D)
SHT 18: RIGGING, LIGHTING AND MISSION EQUIPMENT PLAN VIEWS (CONT'D)
SHT 19: INBOARD PROFILE
SHT 20: MAJOR TRANSVERSE BHD SECTIONS
SHT 21: FWD AND AFT VIEWS
SHT 22: FIRE ZONE BOUNDARY
SHT 23: FIRE ZONE BOUNDARY CONT'D
SHT 24: FIRE ZONE BOUNDARY CONT'D
SHT 25: FIRE ZONE BOUNDARY CONT'D
SHT 26: MACHINERY EQUIPMENT LIST
SHT 27: MACHINERY ARRANGEMENT
SHT 28: MACHINERY ARRANGEMENT CONT'D

AS BUILT

																											0	REV
																											28	SHT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	REV
20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1									SHT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									REV
10	9	8	7	6	5	4	3	2	1																			SHT

REVISION STATUS

DRL NUMBERS

This drawing, design concept and specifications are the property of **VT Halter Marine, Inc.** and are furnished on a confidential basis with an expressed understanding that they will not be copied in any manner, used for manufacture, sold, transferred, nor used to the detriment of said firm without written permission. The recipient further agrees not to disclose these contents hereof to any other parties except for those specific purposes for which this drawing was issued.

VT Halter Marine, Inc.
Vision Technologies Systems

DRAWN BY RMW 3/16/05	ABS APPV
CHECKED BY	USCG APPV
APPROVED BY	OWNER APPV
HULL NO 1944	CAGE CODE 3B213
SIZE D	
ESTIMATE NO 00-104	SCALE NONE

VESSEL
FRV40 CLASS 63m FISHERIES RESEARCH VESSEL

TITLE
BOOKLET OF GENERAL DRAWINGS

JOB NO.	ITEM	DELIVERABLE	SHEET	REV
M279	085	FZ30	001	00

FILE
SHEET 1 OF 28

PLOT: 1=1

DWG NO. M279-085-FZ30 SH 1

COMPARTMENT DIRECTORY (BY TYPE)

TANKAGE

FOREPEAK BALLAST	4-1-0
FUEL OIL TANK #1FS	4-7-1
FUEL OIL TANK #1FP	4-7-2
FUEL OIL TANK #1AS	4-13-1
FUEL OIL TANK #1AP	4-13-2
BOW THRUSTER SEACHEST	4-13-0
FUEL OIL TANK #2C	4-19-0
FUEL OIL TANK #2S	4-19-1
FUEL OIL TANK #2P	4-19-2
WASTE WATER	4-29-0
DB BALLAST #3C	4-34-0
DB BALLAST #3S	4-29-1
DB BALLAST #3P	4-29-2
DB BALLAST #4C	4-39-01
DB FUEL OIL #4S	4-39-1
DB FUEL OIL #4P	4-39-2
WASTE OIL	4-47-1
OILY WASTE	4-47-2
SEACHEST	4-61-1
SEACHEST	4-61-2
FRESH WATER	3-19-1
FRESH WATER	3-19-2
FUEL OIL DAY TANK	3-39-1
FUEL OIL DAY TANK	3-39-2
LUBE OIL TANK	3-47-01
FUEL OIL TANK #5S	3-72-1
FUEL OIL TANK #5P	3-72-2
ROLL STABILIZATION TANK	02-22-0
EMERGENCY GENERATOR DAY TANK	
INCINERATOR TANK	

VOIDS

VOID	4-49-1
BOSSING	4-78-0
VOID	3-78-1
VOID	3-78-2

ACCESSES

CENTERBOARD TRUNK	4-39-0
ACCESS	4-49-0
ACCESS	3-31-0
ACCESS	3-47-0
ACCESS	3-68-0
ESCAPE TRUNK	3-69-2
ACCESS	2-16-2
ACCESS	2-19-0
PASSAGE	2-24-0
PASSAGE	2-29-0
PASSAGE	2-39-0
PASSAGE	1-7-01
PASSAGE	1-36-0
ACCESS	1-51-2
PASSAGE	01-14-0
PASSAGE	01-19-0
PASSAGE	02-38-0
ACCESS	02-51-2

SERVICE SPACES

LAUNDRY	2-11-0
GALLEY	1-19-1
TRASH ROOM	1-65-2

CONTROL SPACES

ENGINEER'S OPERATING STATION	2-63-0
BRIDGE	03-34-0

MACHINERY SPACES

TRANSDUCER ROOM	4-23-0
MAIN MACHINERY ROOM	4-49-0
M.M.R. EXHAUST	4-49-0
M.M.R. SUPPLY	4-49-0
BOW THRUSTER MACHINERY ROOM	3-13-0
DOMESTIC EQUIPMENT ROOM	3-29-0
AUXILARY MACHINERY ROOM	3-39-01
OCEANOGRAPHIC WINCH ROOM	3-68-0
TRAWL WINCH ROOM	3-82-0
FAN ROOM	1-16-1
REF MACHINERY	01-10-2
FAN ROOM	01-37-0
C02 ROOM	01-44-1
EMERGENCY GEN. ROOM	01-54-0

ACCOMMODATIONS

MESS ROOM	1-19-0
TOILET	1-43-2
W/C	1-63-2
READY ROOM	1-70-2
EXERCISE ROOM	2-19-0
SH & T	2-19-1
STATEROOM	2-23-1
STATEROOM	2-23-2
SH & T	2-26-1
SH & T	2-26-2
SH & T	2-29-1
SH & T	2-29-2
STATEROOM	2-29-4
SH & T	2-31-1
STATEROOM	2-31-3
STATEROOM	2-31-5
STATEROOM	2-34-2
SH & T	2-36-2
SH & T	2-39-2
SH & T	2-39-3
STATEROOM	2-39-4
STATEROOM	2-39-5
STATEROOM	2-44-1
STATEROOM	2-44-2
SH & T	2-46-1
SH & T	2-46-2
LOUNGE	01-19-1
STATEROOM	01-19-2
SH & T	01-21-2
SH & T	01-24-2
STATEROOM	01-24-4
STATEROOM	01-28-2
CONFERENCE ROOM	01-29-1
SH & T	01-30-2
SH & T	01-33-2
STATEROOM	01-33-4
STATEROOM	02-29-0
SR. CHIEF SCIENTIST	02-29-1
SR. CHIEF ENGINEER	02-29-2
SH & T	02-35-1
SH & T	02-35-2
SH & T	02-35-3
STATEROOM	02-38-2
SR. COMMANDING OFFICER	02-39-1
SH & T	02-43-1
SHT & T	02-44-4
SH & T	02-44-6
STATEROOM	02-45-0
SH & T	02-45-1
STATEROOM	02-46-2
TOILET	02-50-0
SH & T	02-50-1
HOSPITAL	02-50-3

OFFICE/LAB/WORKSHOPS

DRY LAB	1-31-1
AUTOSALINATOR ROOM	1-31-3
HYDROGRAPHIC LAB	1-38-1
ACOUSTIC/COMPUTER LAB	1-38-2
CHEMISTRY LAB	1-47-0
CONTROLLED ENVIRONMENT ROOM	1-56-2
FISH/WET LAB	1-58-0
ET SHOP	01-47-2
OFFICE SUITE	01-37-2

STORES & LOCKERS

LOCKED STORES	3-29-1
GENERAL STORES	3-32-1
CHAIN LOCKER	2-5-0
SCIENTIFIC STORES	2-7-0
STEWARD STORES	2-7-1
CG LOCKER	2-21-2
LINEN LOCKER	2-39-1
SCIENTIFIC STORES	1-4-0
FREEZER ROOM	1-7-0
DRY STORES	1-7-1
CHILL ROOM	1-11-2
CG LOCKER	1-47-1
SCIENTIFIC FREEZER	1-58-1
DK LOCKER	1-78-2
HAZMTL/PAINT STORAGE	1-78-4
DIVE LOCKER	01-10-1
DC LOCKER	01-10-1
DECK LOCKER	01-12-1
CG LOCKER	01-27-1
LINEN LOCKER	01-29-1
LINEN LOCKER	02-47-1
CG LOCKER	02-48-0
DC LOCKER	02-53-2

CHARACTERISTICS

LENGTH OVERALL	=	63.57 m
LENGTH BETWEEN PERPENDICULARS	=	58.00 m
BEAM, EXTREME	=	15.00 m
BEAM, ON DWL AT MIDSHIPS	=	15.00 m
SLOPE OF KEEL DRAG	=	1: 37.12

BASELINE LOCATED .55 m BELOW MLD KEEL AT MIDSHIPS
COMPLEMENT 39 (TOTAL)

LIST OF BOATS, LIFERAFTS & DAVITS

(2) LIFERAFT DAVITS-SCHAT-HARDING
(2) 25 DKF LIFERAFTS-SCHAT-HARDING
(2) 35 DKF LIFERAFTS-SCHAT-HARDING
(1) RESCUE BOAT-SCHAT-HARDING
(1) RESCUE BOAT DAVIT W/ WINCH-SCHAT-HARDING
(1) WORKBOAT-WELIN LAMBIE
(1) WORKBOAT DAVIT-WELIN LAMBIE

DECK MACHINERY

(1) ANCHOR WINDLASS
(1) GILSON WINCH
(1) NET SONDE WINCH
(1) NET REEL
(1) SIDE 'A' FRAME
(1) STERN GANTRY
(2) AFT DECK CRANES
(1) FWD STORES CRANE
(2) HYDROGRAPHIC WINCHES

WEIGHT HANDLING DEVICES MAX. LIFTING CAPACITIES

AFT DECK CRANE=8,100 LBS.
FWD STORES CRANE=1,000 LBS.
ANCHOR WINDLASS=39,100 LBS. LINE PULL @ 30 F.P.M.
GILSON WINCH=42,990 LBS.
NET SONDE WINCH=7,937 LBS.
NET REEL=43,872 LBS.
HYDROGRAPHIC WINCHES=11,023 LBS.
TRAWL WINCH (P/S)=77,603 LBS.
TRACTION WINCH=29,983 LBS.
STORAGE WINCH=7,496 LBS.
SIDE 'A' FRAME=14,590 LBS.
STERN GANTRY=80,502 LBS.

PROPELLER CHARACTERISTICS

NUMBER OF BLADES: 5
DIAMETER: 14.1 FT (4.297 m)
EXPANDED AREA RATIO: 0.637
RIGHT HAND ROTATION
THICKNESS SECTION: NACA 66 (DTMB MODIFIED)
CAMBER SECTION: 3-D FROM a=0.8 MEANLINE
MATERIAL: NICKEL-ALUMINUM-BRONZE (ABS TYPE 4)

STEERING UNIT DESCRIPTION:

WORKING TORQUE: 1015 kNm
WORKING PRESSURE: 80 bar
MAX. RUDDER STOCK DIAMETER: 450 mm
TAPER BORE FOR LESS DIAMETER AVAILABLE IN STEPS OF 10 mm.
MAX. RUDDER ANGLE, MECHANICAL LIMIT: 2x46,5 DEGREES
WORKING RUDDER ANGLE, ELECTRICAL LIMIT: 2x35,0 DEGREES
STEERING TIME AT 35-0-35 DEGREES RUDDER ANGLE:
ONE PUMP WORKING: 28 SECONDS
TWO PUMPS WORKING: 14 SECONDS
HYDRAULIC OIL-ISO. 68.

GENERATING PLANT DESCRIPTION:

THREE PHASE BRUSHLESS SYNCHRONOUS
WINDINGS CONNECTION: STAR (Y). 6 LEADS BROUGHT OUT
NUMBER OF POLES: 4
POWER FACTOR: 0.8 LAGGING
RATED VOLTAGE: 600 V
RATED FREQUENCY: 60 Hz
RATED SPEED: 1800 r/min
RUNAWAY SPEED: 2160 r/min
REFERENCE STANDARDS: NEMA/IEEE 45/ ABS CLASSIFICATION
TIME RATING/SF: CONTINUOUS RUNNING DUTY

POWER PLANT CHARACTERISTICS:

(2) DIESEL GENSETS (1360 KW)
(2) DIESEL GENSETS (910 KW)
ELECTRIC PROPULSION SYSTEM

GROSS TONNAGE:

2218

ABS EQUIPMENT NUMERAL:

660

DISPLACEMENTS:

FULL LOAD=2538.03 METRIC TONNES
LIGHT SHIP=1754.98 METRIC TONNES

NAVIGATIONAL DRAFT (FULL LOAD CONDITION):

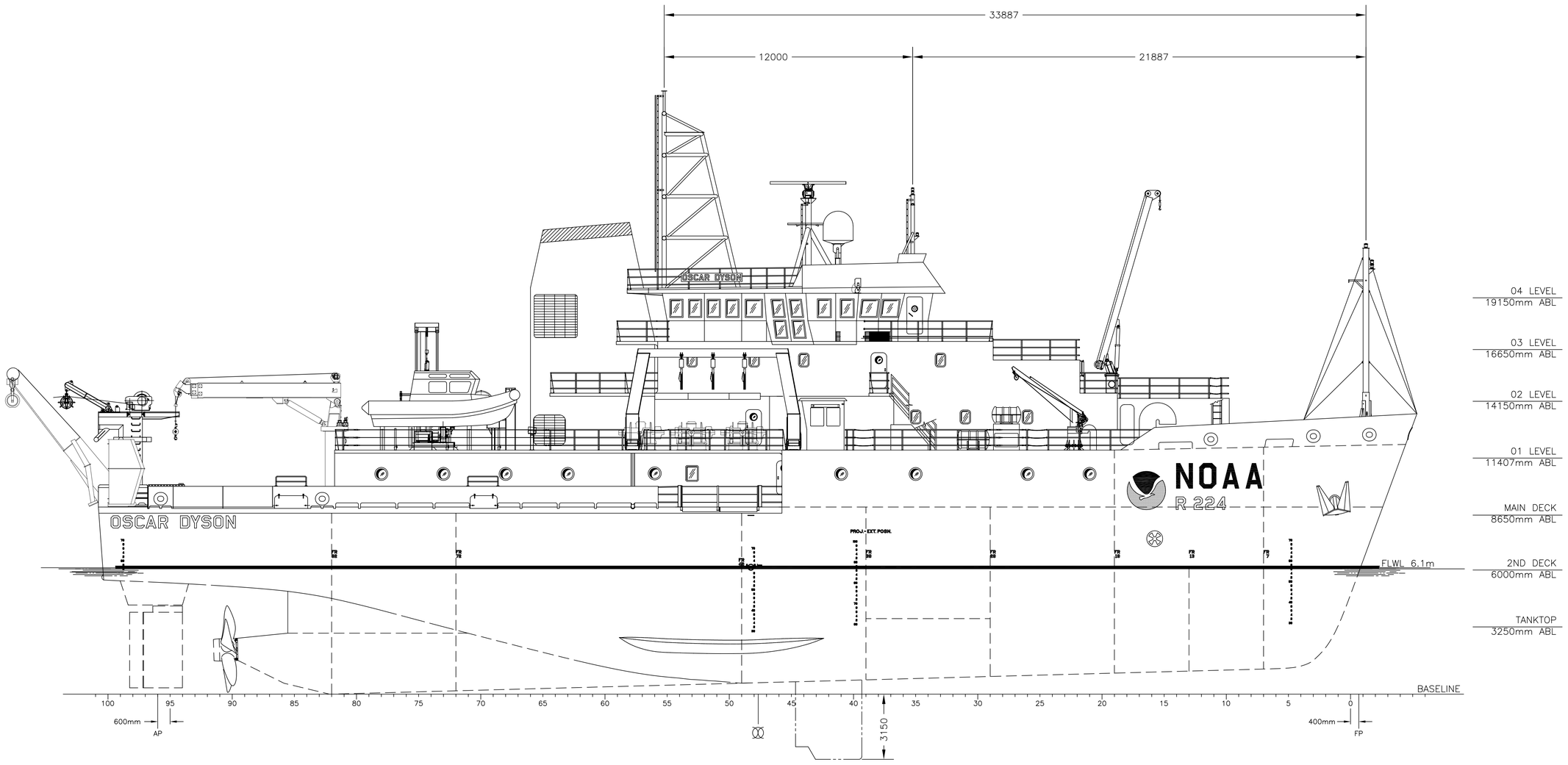
CENTERBOARD RETRACTED= 6.11m @ F.P. & 6.09m @ A.P.

CENTERBOARD EXTENDED= 9.91m @ F.P. & 9.89m @ A.P.

DWG NO. M279-085-FZ30 SH 2

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	002	00
ESTIMATE NO	SCALE		FILE			SHEET 2 OF	
00-104	1:1						

PLOT: 1:1



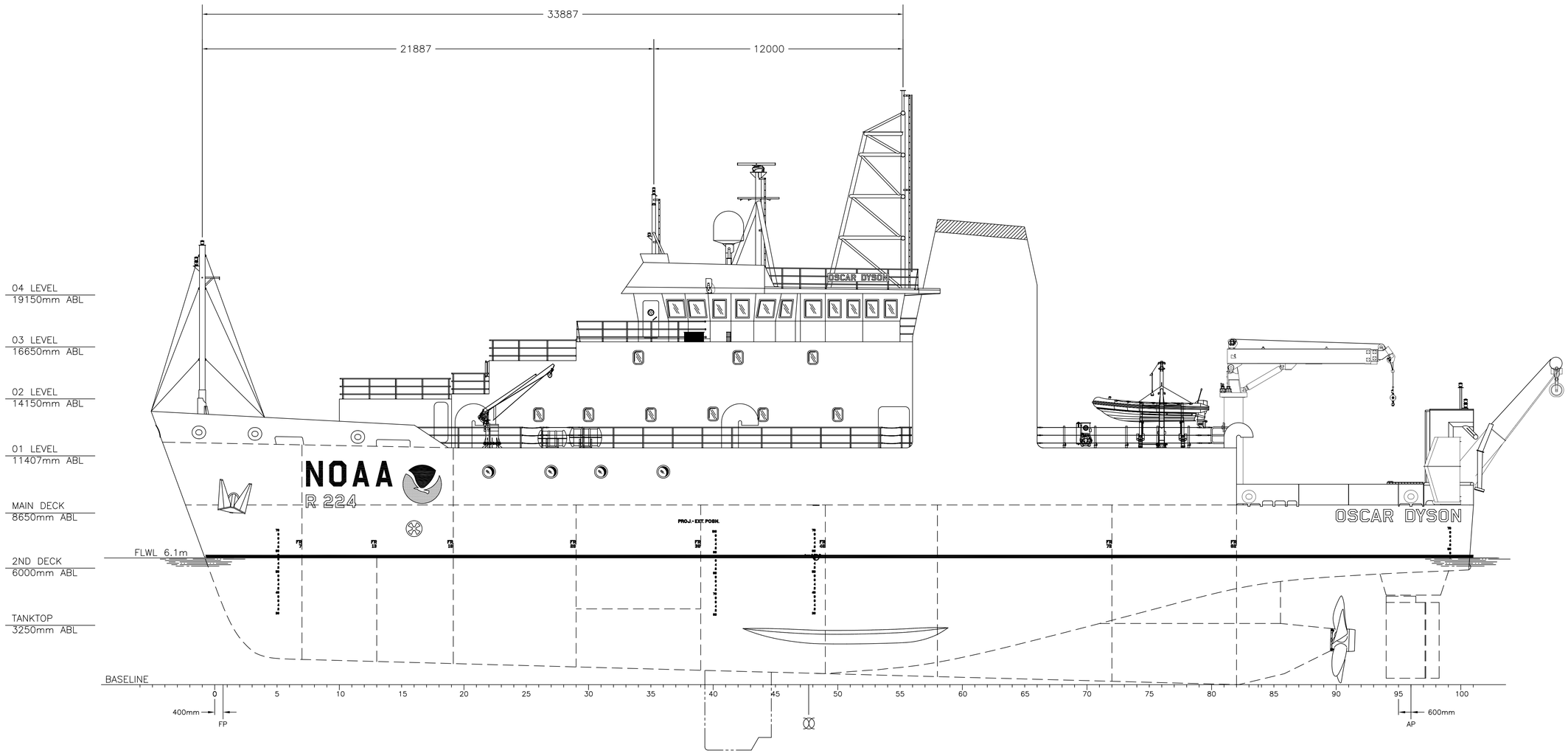
OUTBOARD PROFILE

STARBOARD SHOWN

DWG NO. M279-085-FZ30 SH 3

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	003	00
ESTIMATE NO	SCALE		FILE			SHEET 3 OF	
00-104	1:100						

PLOT: 1=100



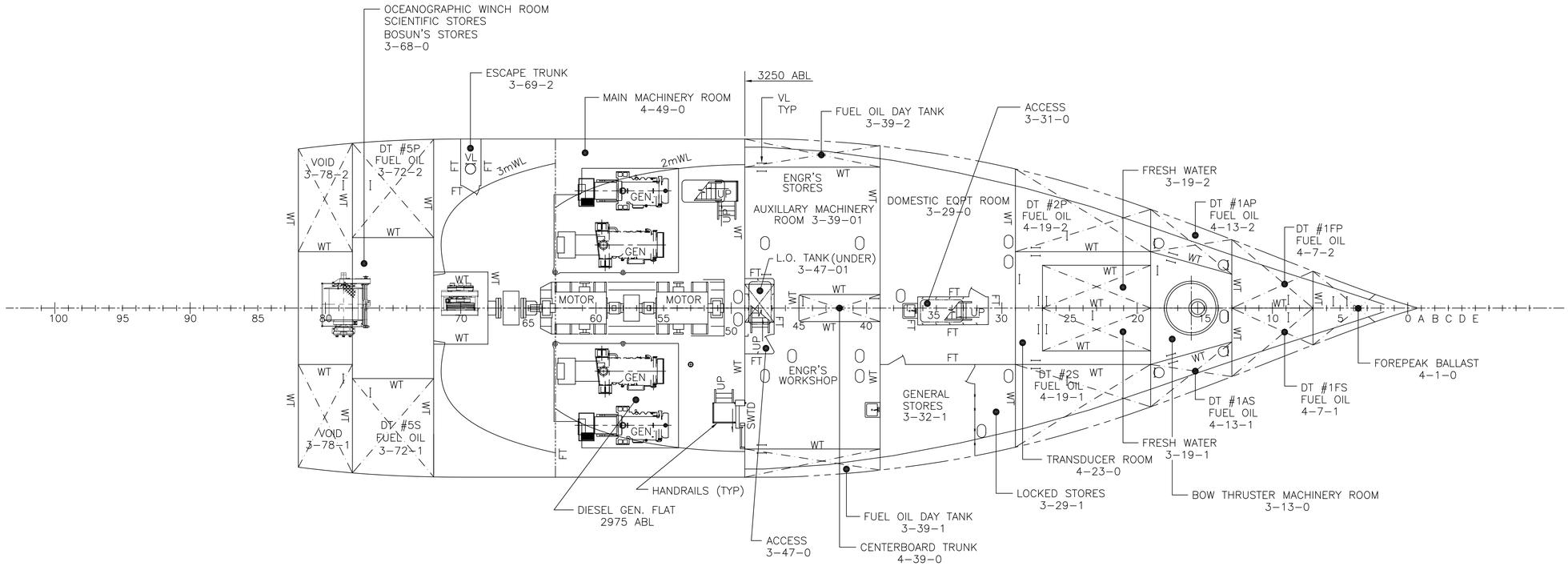
OUTBOARD PROFILE

PORT SHOWN

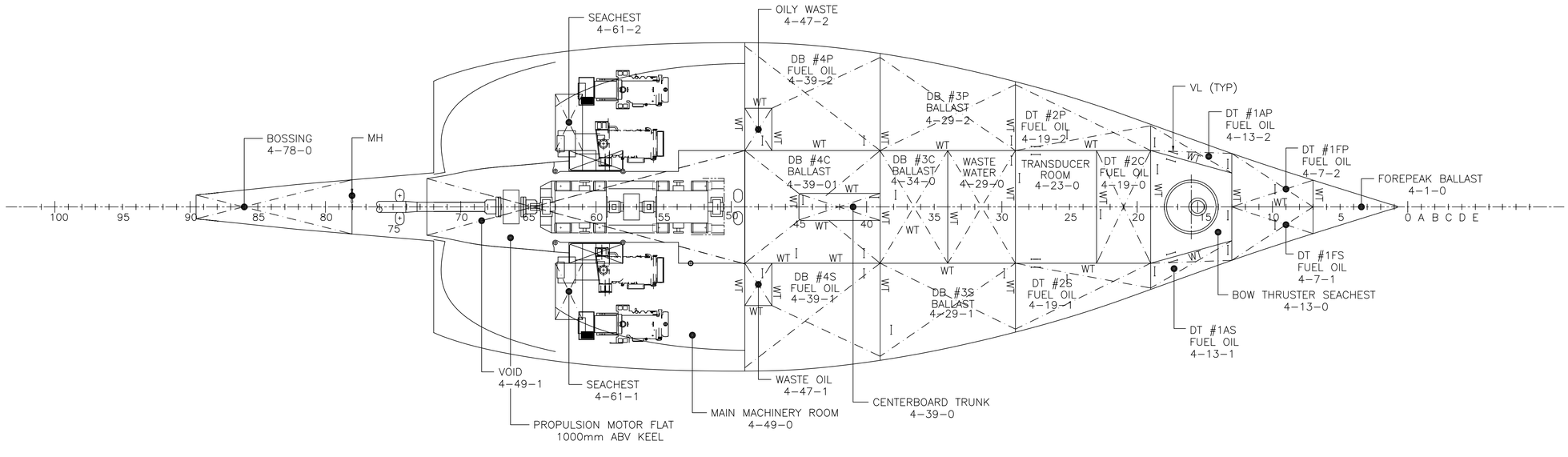
DWG NO. M279-085-FZ30 SH 4

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	004	00
ESTIMATE NO	SCALE		FILE			SHEET 4 OF	
00-104	1:100						

PLOT: 1=100



TANKTOP
HEIGHT AS NOTED

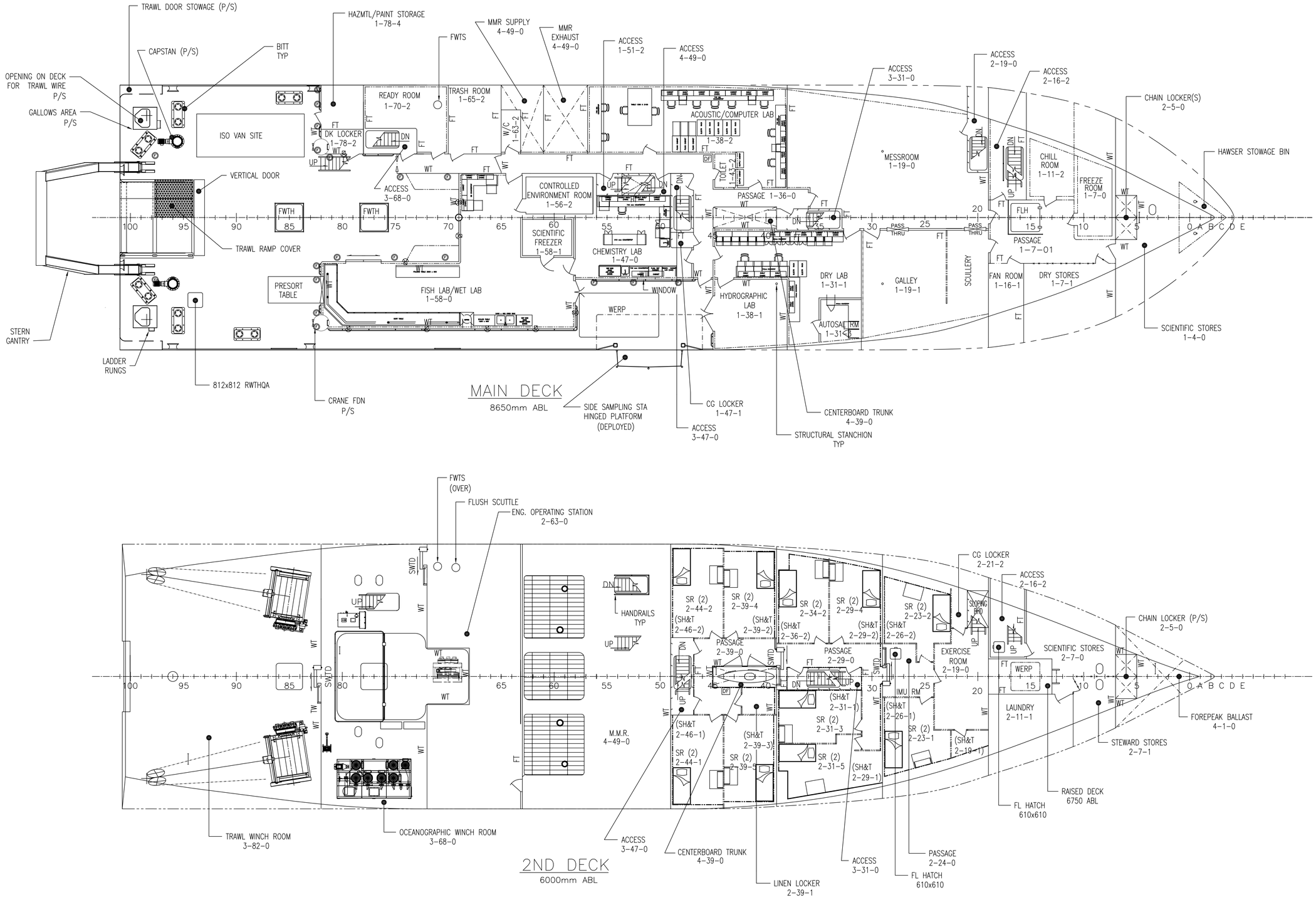


INNERBOTTOM

DWG NO. M279-085-FZ30 SH 5

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	005	00
ESTIMATE NO	SCALE		FILE			SHEET 5 OF	
00-104	1:100						

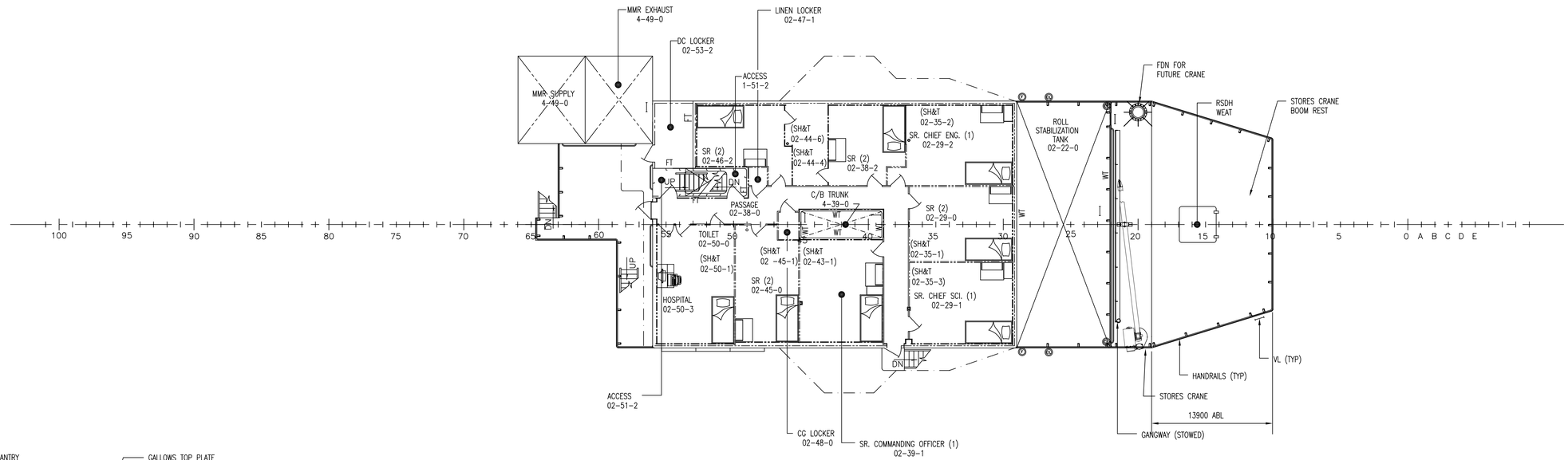
PLOT: 1=100



HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	006	00
ESTIMATE NO	SCALE						
00-104	1:100		FILE			SHEET 6 OF	

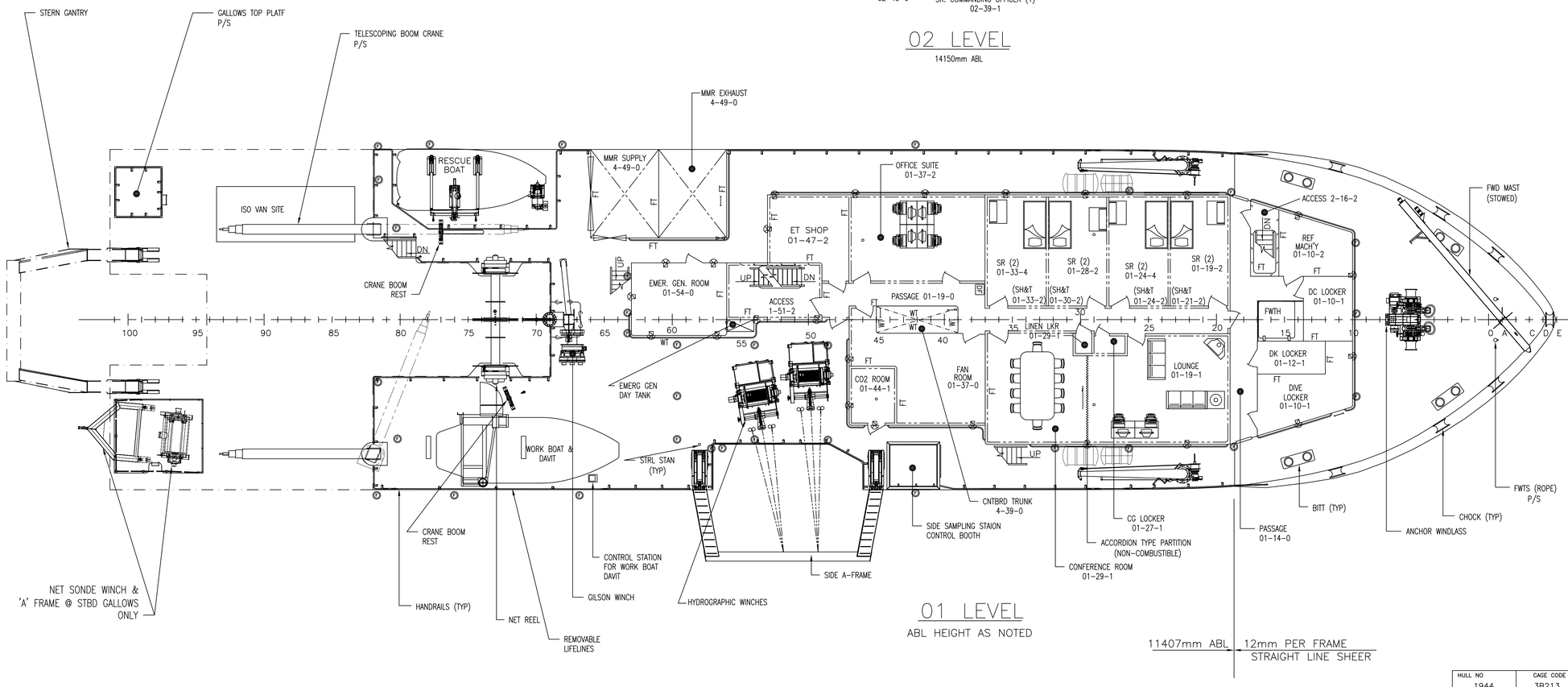
PLOT: 1=100

DWG NO. M279-085-FZ30 SH6



02 LEVEL

14150mm ABL



01 LEVEL

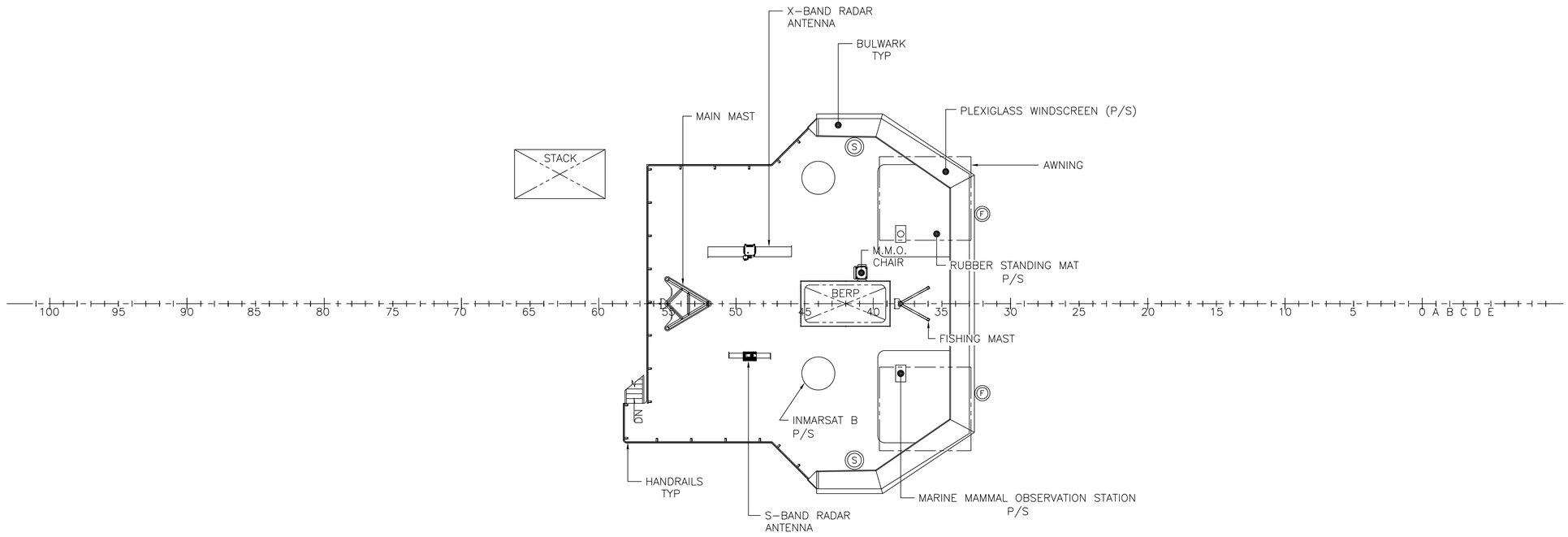
ABL HEIGHT AS NOTED

11407mm ABL — 12mm PER FRAME STRAIGHT LINE SHEER

DWG NO. M279-085-FZ30 SH 7

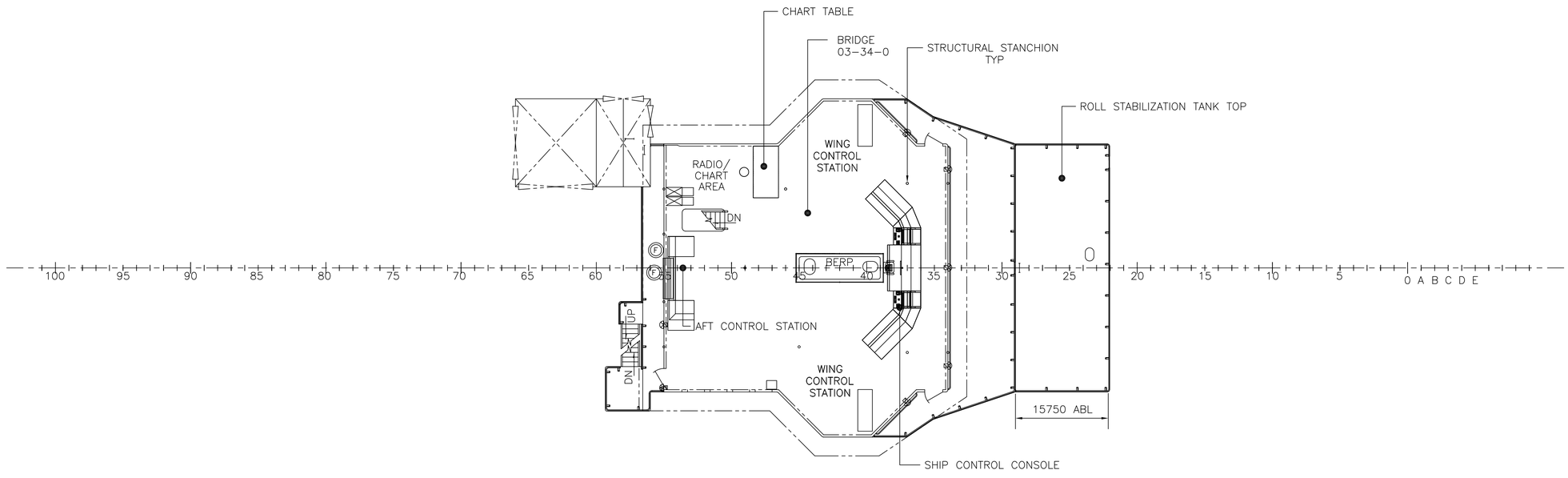
HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	007	00
ESTIMATE NO	SCALE		FILE			SHEET 7 OF	
00-104	1:100						

PLOT: 1=100


X-BAND RADAR ANTENNA
BULWARK TYP
MAIN MAST
PLEXIGLASS WINDSCREEN (P/S)
STACK
AWNING
M.M.O. CHAIR
RUBBER STANDING MAT P/S
BERP
FISHING MAST
INMARSAT B P/S
HANDRAILS TYP
S-BAND RADAR ANTENNA
MARINE MAMMAL OBSERVATION STATION P/S
100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 A B C D E

04 LEVEL

19150mm ABL



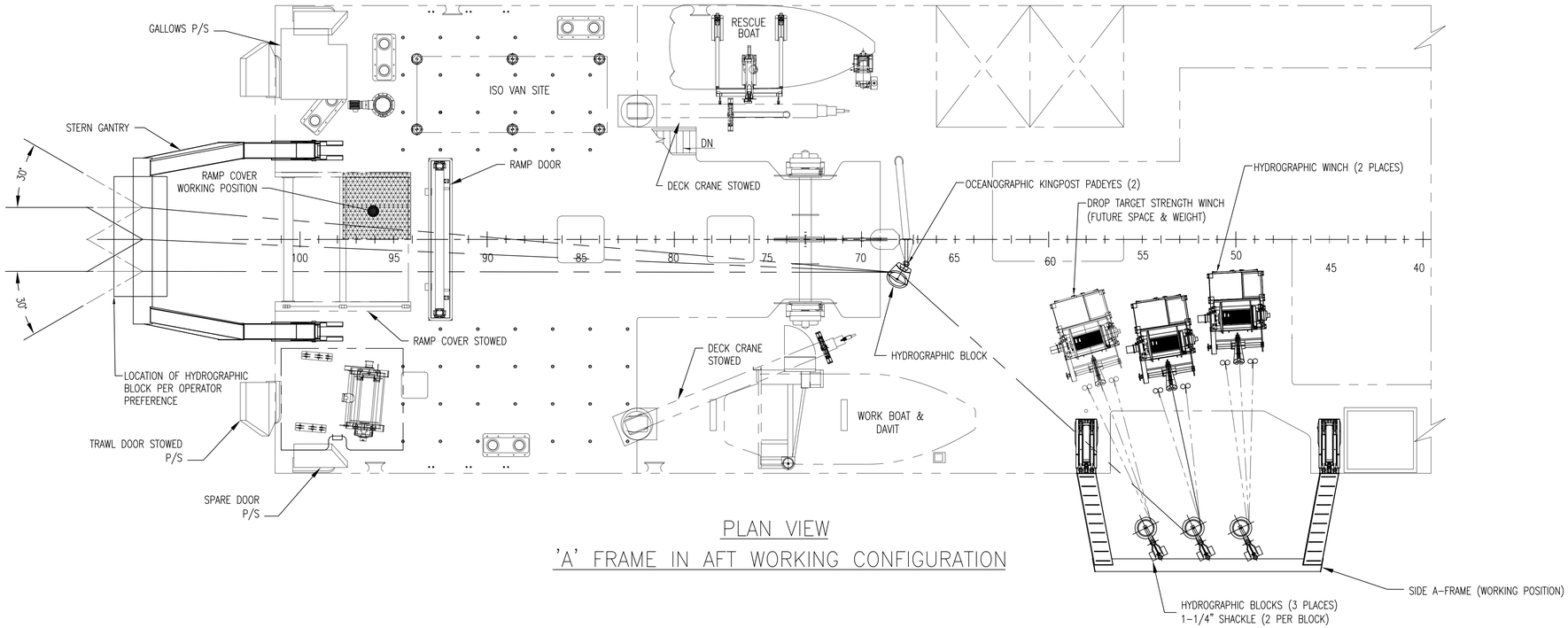
03 LEVEL

16650mm ABL UNO

DWG NO. M279-085-FZ30 SH 8

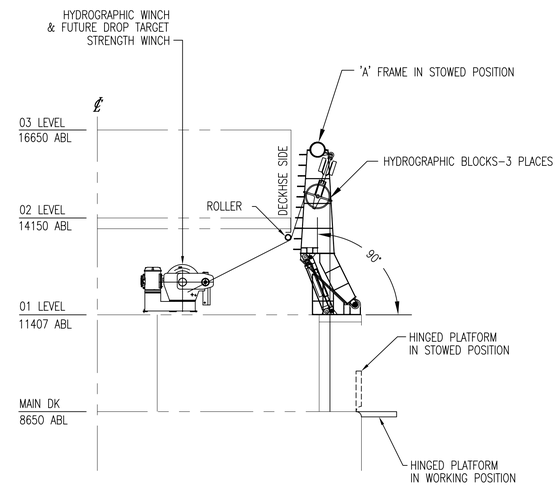
HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	008	00
ESTIMATE NO	SCALE						
00-104	1:100		FILE			SHEET 8 OF	

PLOT: 1=100



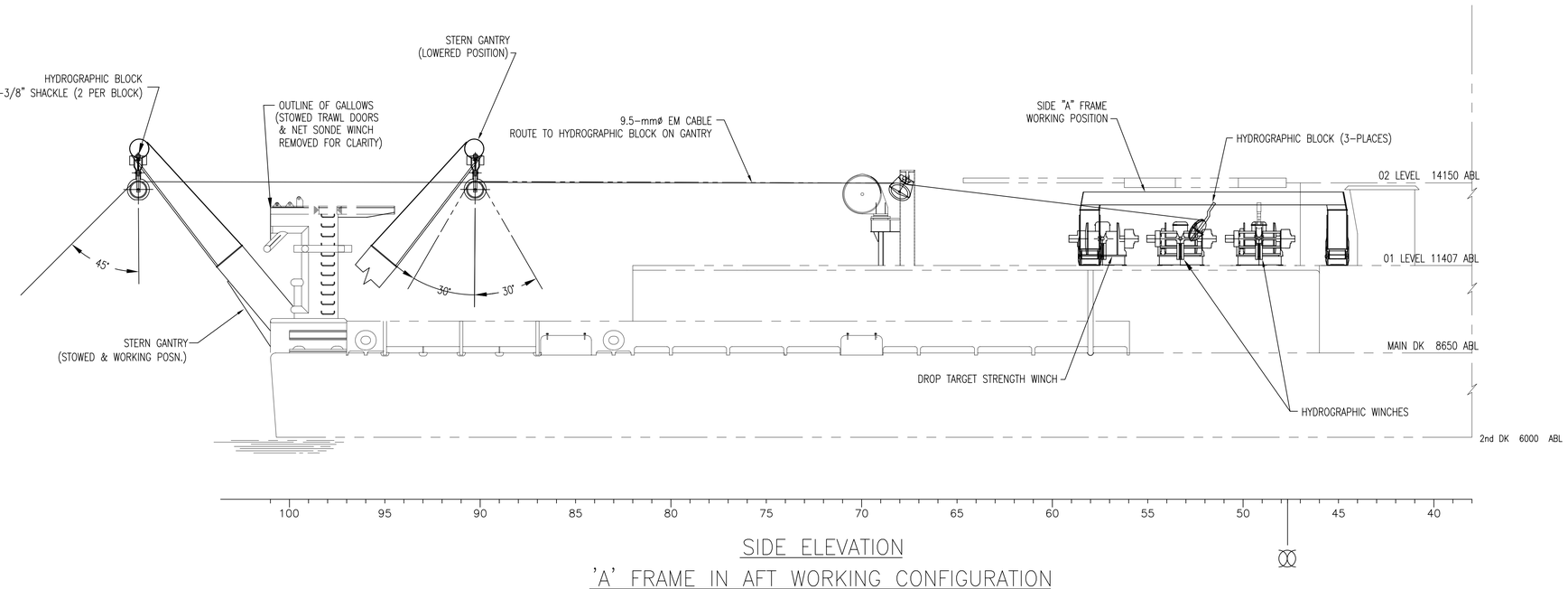
PLAN VIEW

'A' FRAME IN AFT WORKING CONFIGURATION



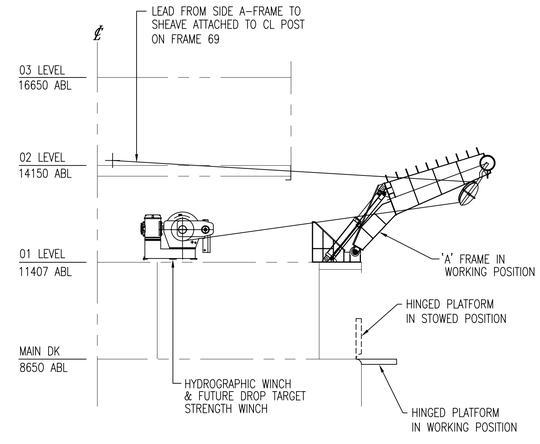
'A' FRAME AT POINT OF LIFT

FR 58 LOOKING FWD



SIDE ELEVATION

'A' FRAME IN AFT WORKING CONFIGURATION


LEAD FROM SIDE A-FRAME TO SHEAVE ATTACHED TO CL POST ON FRAME 69
03 LEVEL 16650 ABL
02 LEVEL 14150 ABL
01 LEVEL 11407 ABL
MAIN DK 8650 ABL
'A' FRAME IN WORKING POSITION
HINGED PLATFORM IN STOWED POSITION
HYDROGRAPHIC WINCH & FUTURE DROP TARGET STRENGTH WINCH
HINGED PLATFORM IN WORKING POSITION

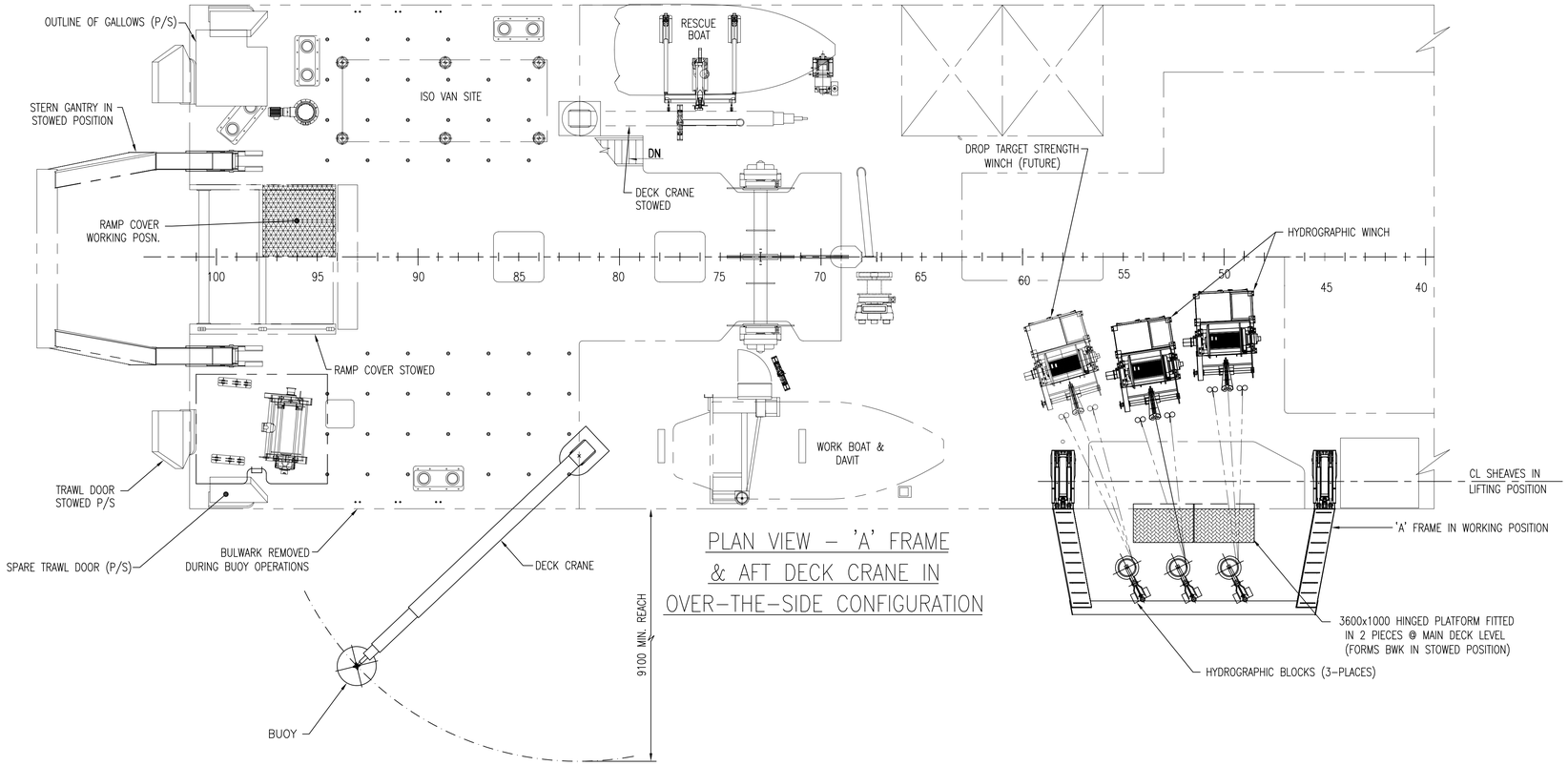
'A' FRAME IN AFT WORKING CONFIGURATION

FR 58 LOOKING FWD

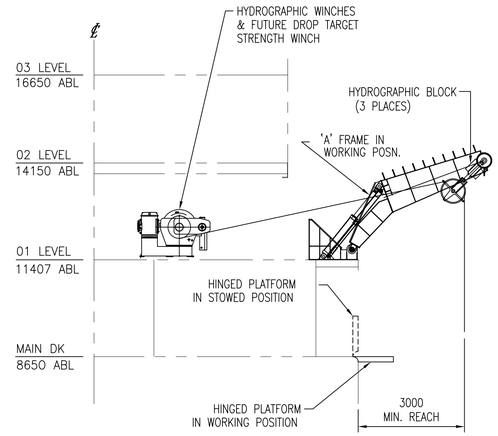
DWG NO. M279-085-FZ30 SHg

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	009	00
ESTIMATE NO	SCALE		FILE			SHEET 9 OF	
00-104	1:80						

PLOT: 1=80

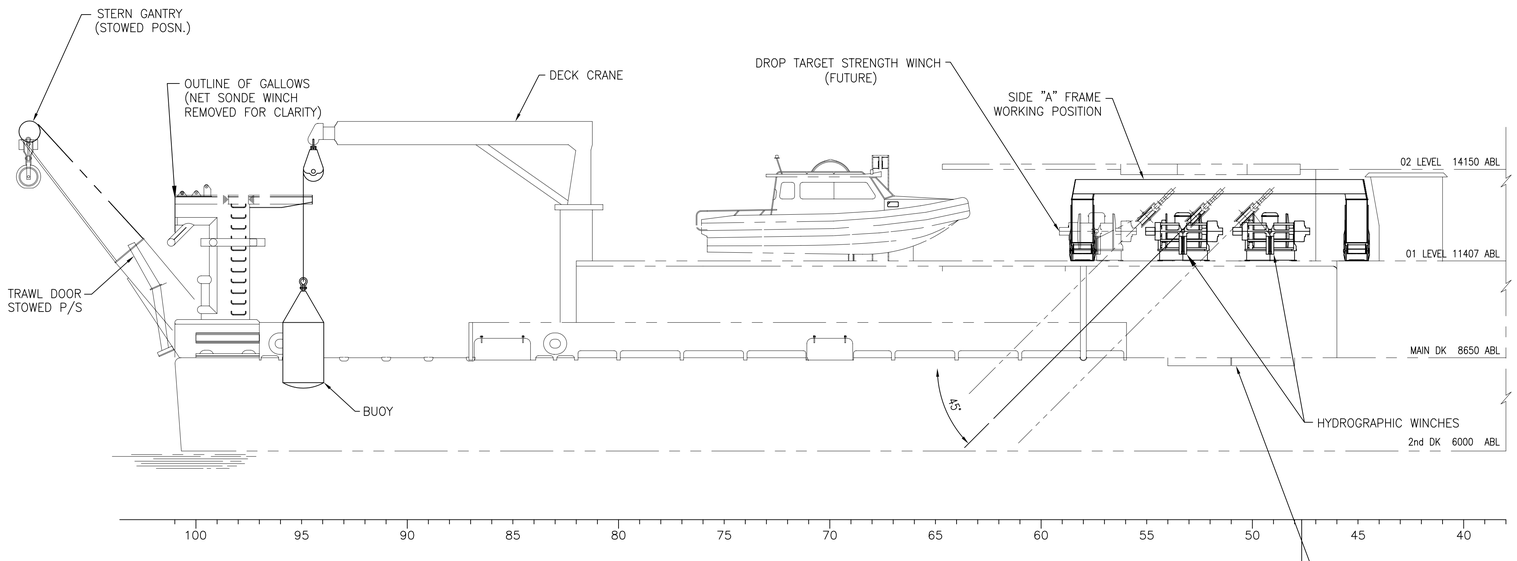


PLAN VIEW – 'A' FRAME & AFT DECK CRANE IN OVER–THE–SIDE CONFIGURATION


HYDROGRAPHIC WINCHES & FUTURE DROP TARGET STRENGTH WINCH
℄
03 LEVEL 16650 ABL
02 LEVEL 14150 ABL
01 LEVEL 11407 ABL
MAIN DK 8650 ABL
HYDROGRAPHIC BLOCK (3 PLACES)
'A' FRAME IN WORKING POSN.
HINGED PLATFORM IN STOWED POSITION
HINGED PLATFORM IN WORKING POSITION
3000 MIN. REACH

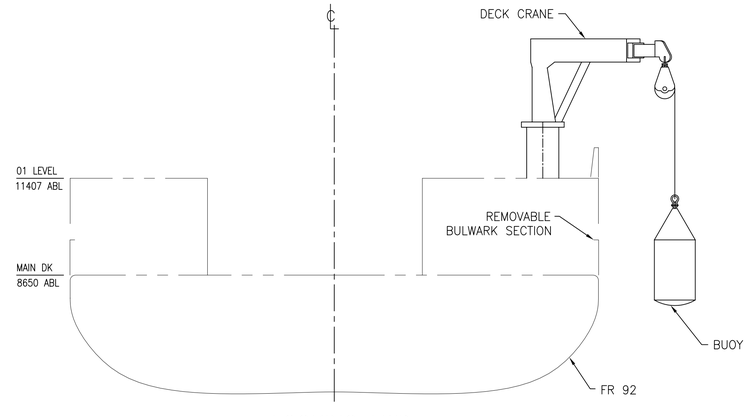
'A' FRAME IN OVER–THE–SIDE WORKING CONFIGURATION

FR 58 LOOKING FWD



SIDE ELEVATION

'A' FRAME & AFT DECK CRANE IN OVER–THE–SIDE CONFIGURATION



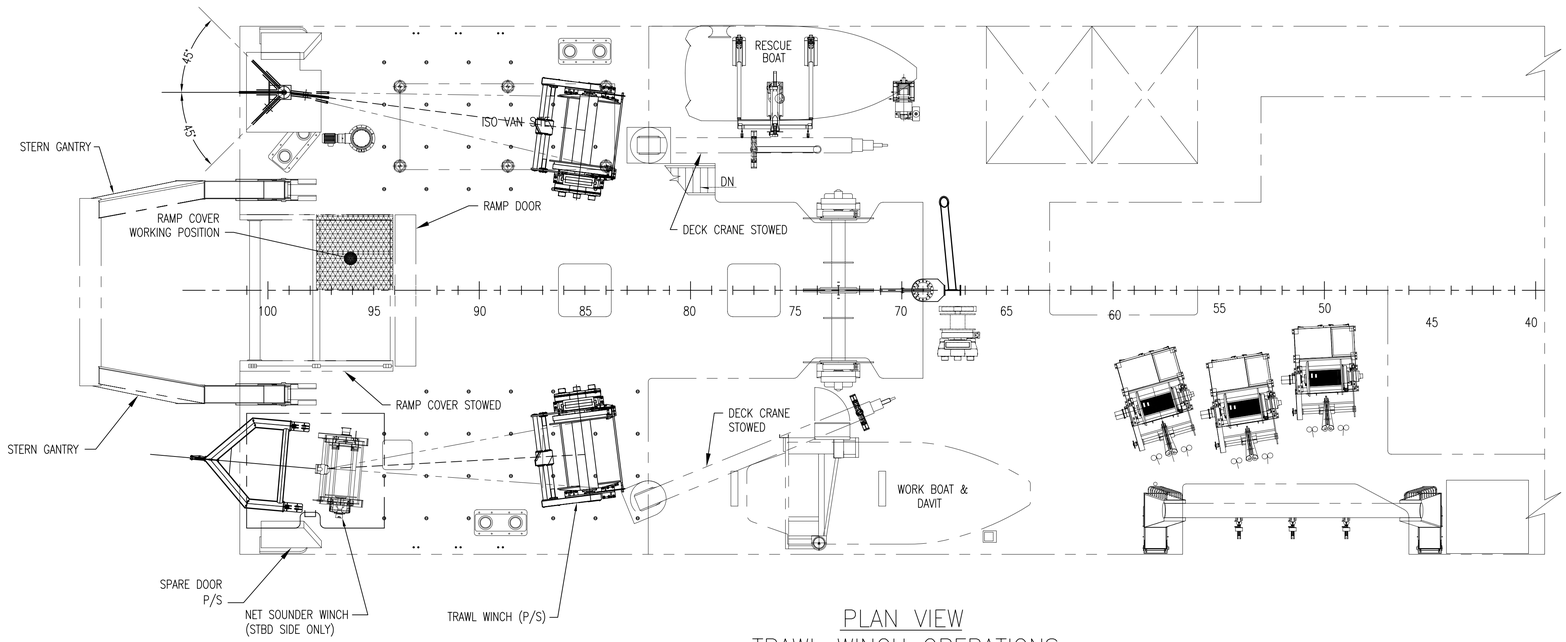
LOOKING FWD

AFT DECK CRANE IN OVER–THE–SIDE OPERATIONS

DWG NO. M279–085–FZ30 SH 10

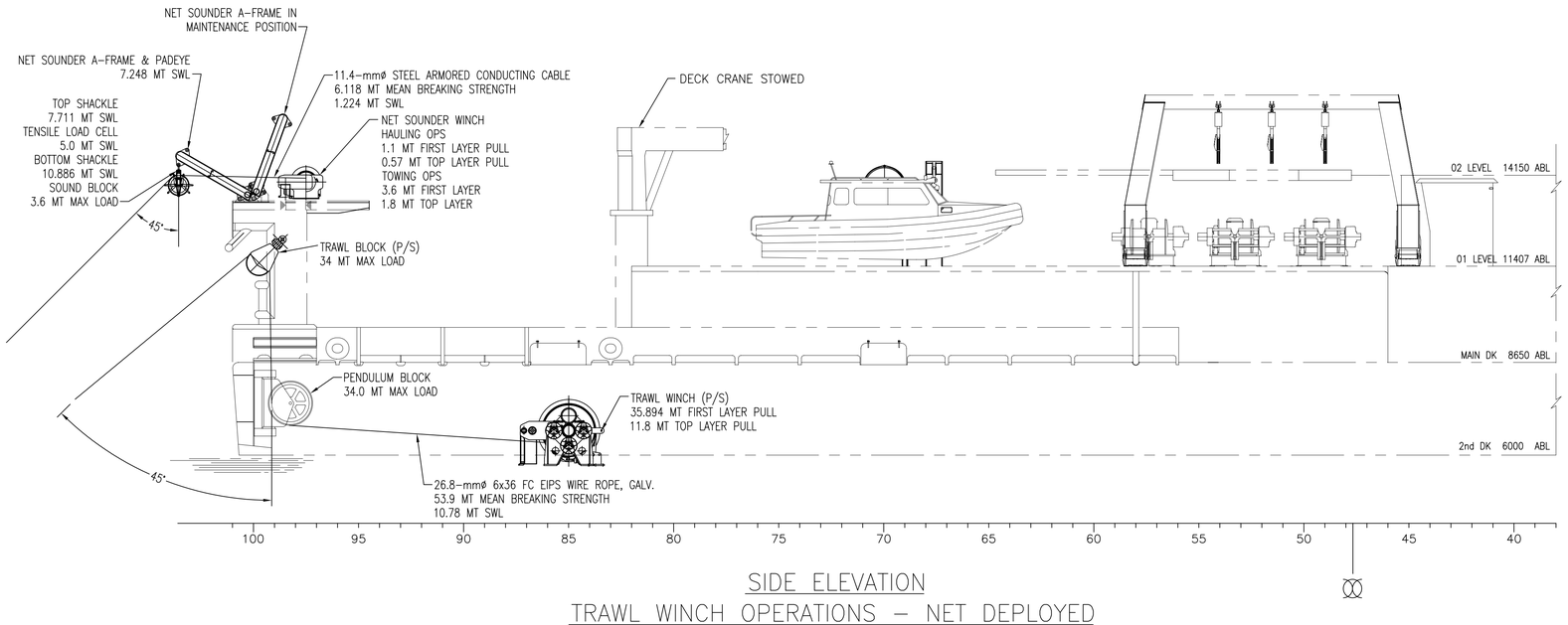
HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	010	00
ESTIMATE NO	SCALE		FILE			SHEET 10 OF	
00–104	1:80						

PLOT: 1=80

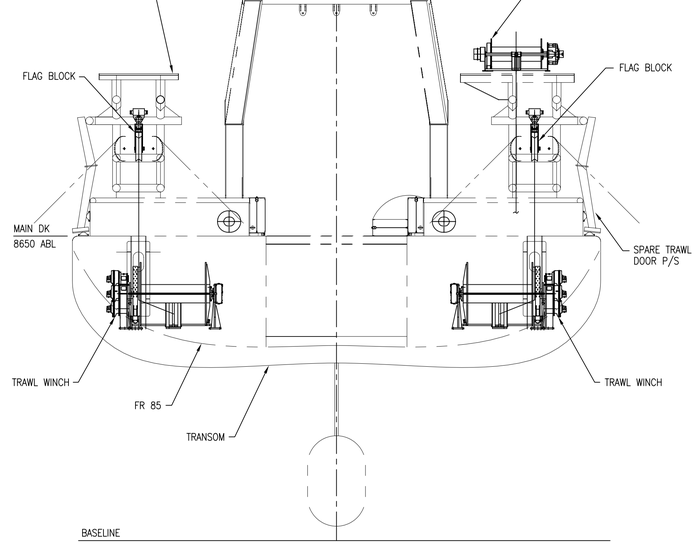


PLAN VIEW
TRAWL WINCH OPERATIONS
NET DEPLOYED

(SELECTED FITTING & EQUIPMENT ON AFT MN DECK REMOVED FOR CLARITY)


NET SOUNDER A-FRAME IN MAINTENANCE POSITION
NET SOUNDER A-FRAME & PADEYE 7.248 MT SWL
11.4-mmø STEEL ARMORED CONDUCTING CABLE 6.118 MT MEAN BREAKING STRENGTH 1.224 MT SWL
DECK CRANE STOWED
TOP SHACKLE 7.711 MT SWL
TENSILE LOAD CELL 5.0 MT SWL
BOTTOM SHACKLE 10.886 MT SWL
SOUND BLOCK 3.6 MT MAX LOAD
NET SOUNDER WINCH HAULING OPS 1.1 MT FIRST LAYER PULL 0.57 MT TOP LAYER PULL TOWING OPS 3.6 MT FIRST LAYER 1.8 MT TOP LAYER
45°
TRAWL BLOCK (P/S) 34 MT MAX LOAD
02 LEVEL 14150 ABL
01 LEVEL 11407 ABL
MAIN DK 8650 ABL
PENDULUM BLOCK 34.0 MT MAX LOAD
TRAWL WINCH (P/S) 35.894 MT FIRST LAYER PULL 11.8 MT TOP LAYER PULL
2nd DK 6000 ABL
45°
26.8-mmø 6x36 FC EIPS WIRE ROPE, GALV. 53.9 MT MEAN BREAKING STRENGTH 10.78 MT SWL
100
95
90
85
80
75
70
65
60
55
50
45
40

SIDE ELEVATION
TRAWL WINCH OPERATIONS – NET DEPLOYED

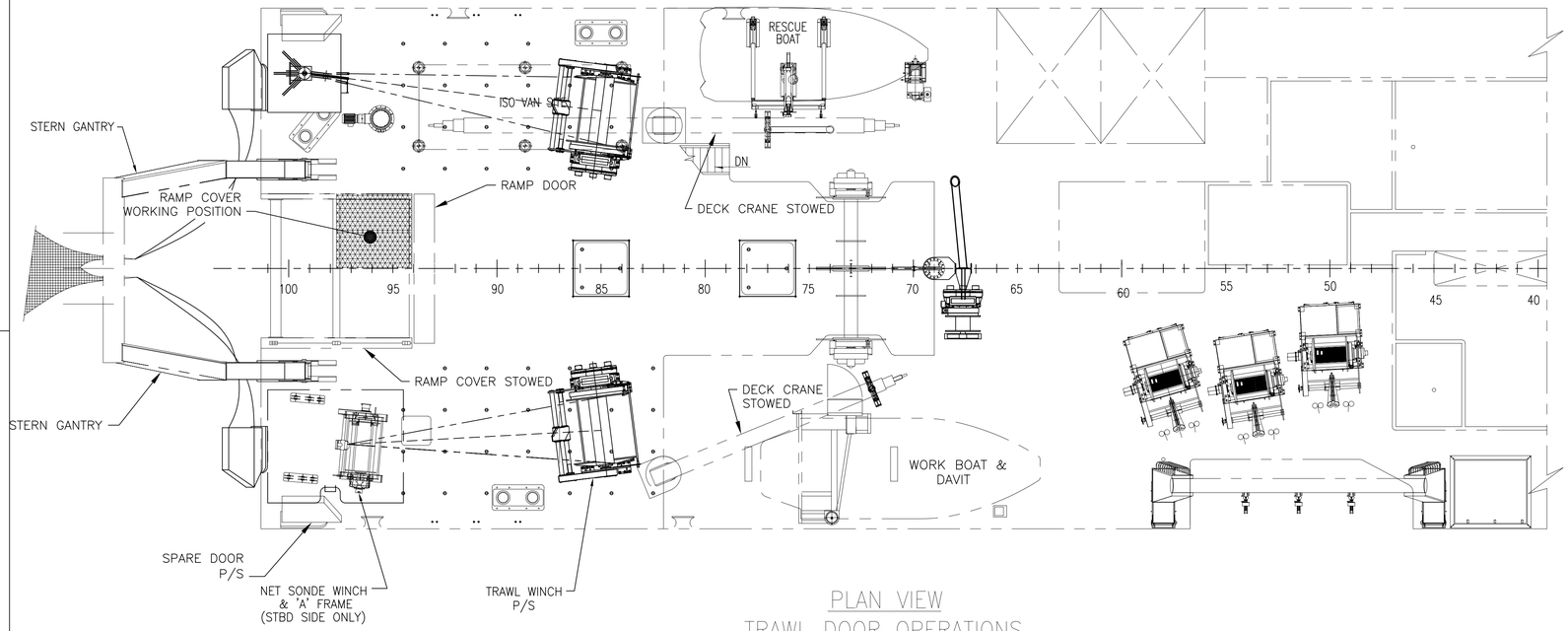


LOOKING FWD
TRAWL WINCH OPERATIONS–NET DEPLOYED

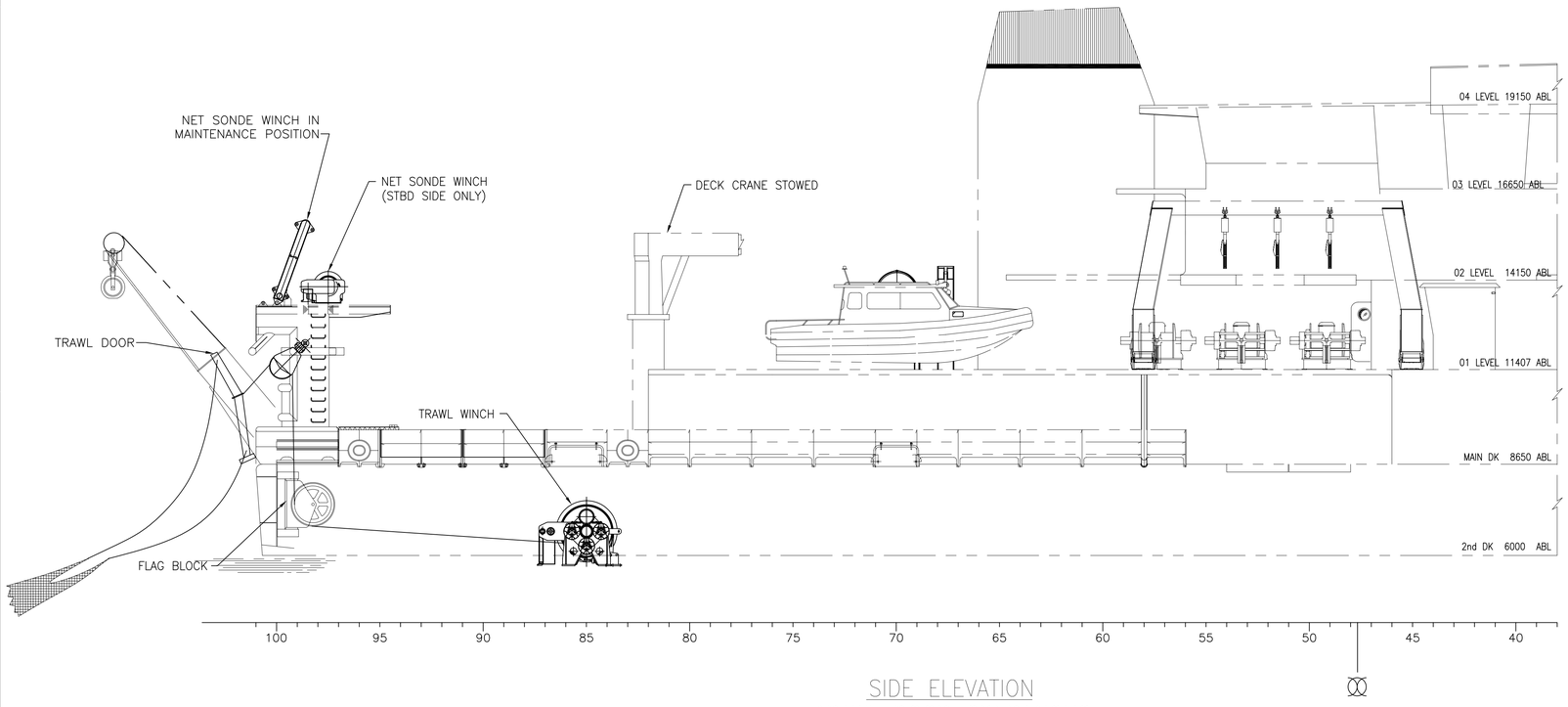
DWG NO. M279-085-FZ30 SH 11

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	011	00
ESTIMATE NO	SCALE		FILE			SHEET 11 OF	
00-104	1:80						

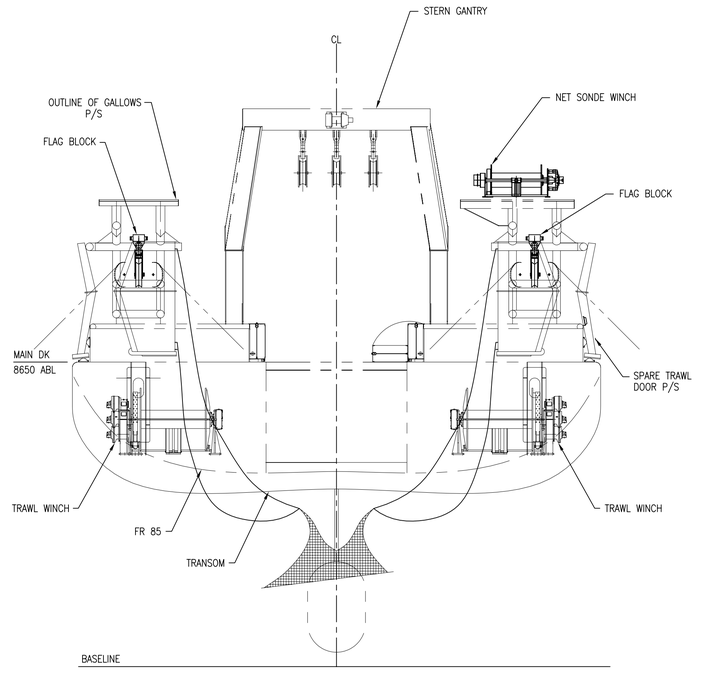
PLOT: 1=80



PLAN VIEW
TRAWL DOOR OPERATIONS



SIDE ELEVATION
TRAWL DOOR OPERATIONS

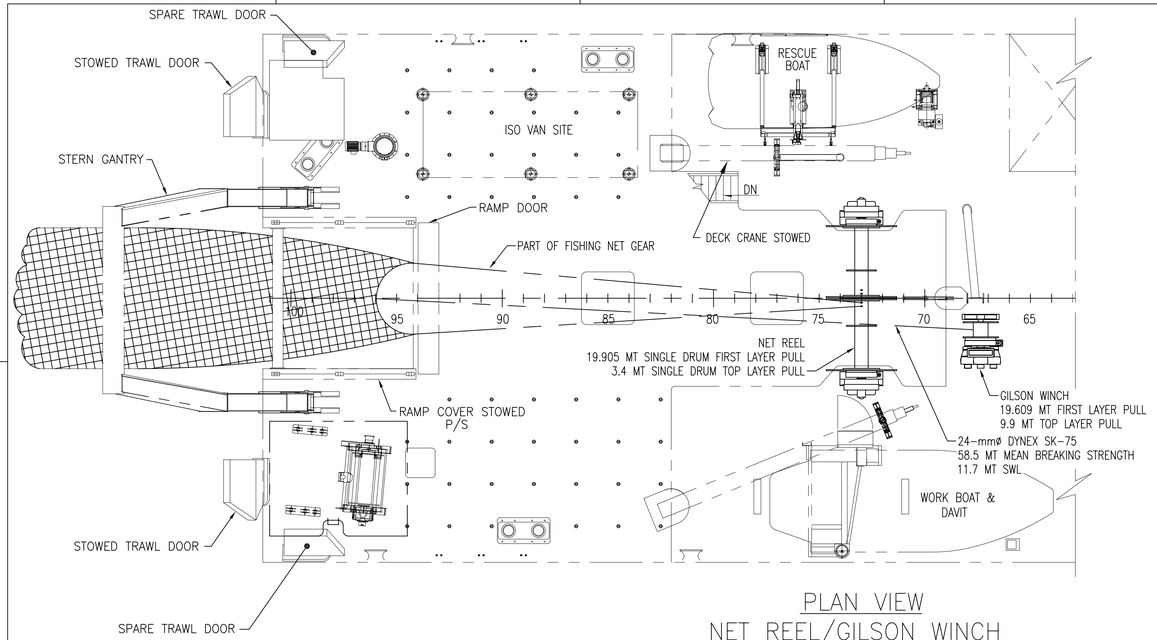


LOOKING FWD
TRAWL DOOR OPERATIONS

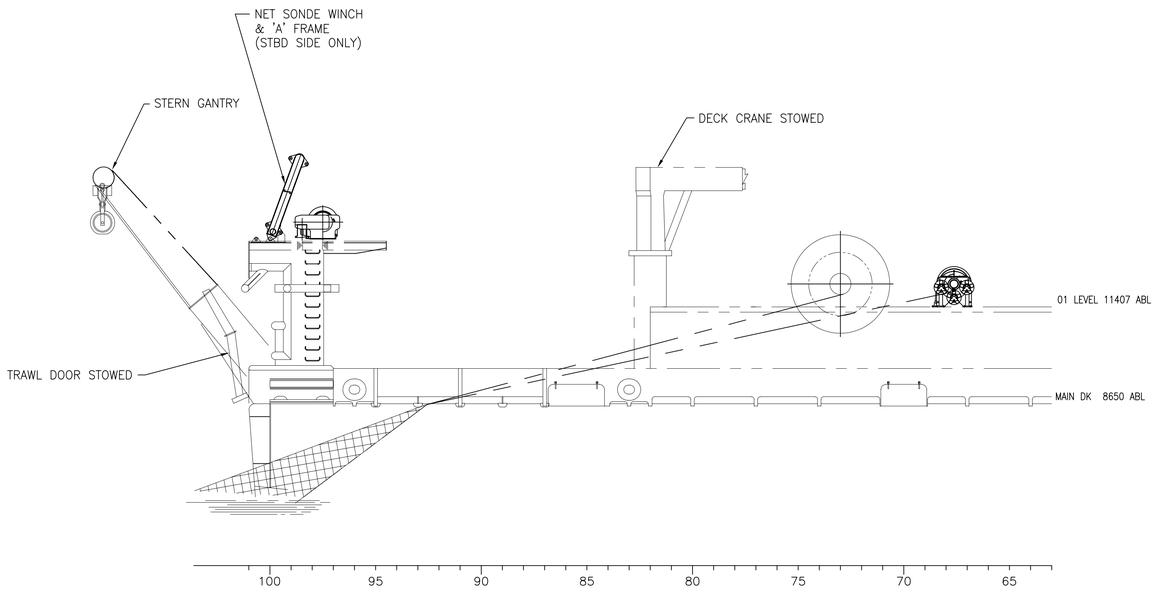
DWG NO. M279-085-FZ30 SH 12

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	012	00
ESTIMATE NO	SCALE		FILE			SHEET 12 OF	
00-104	1:80						

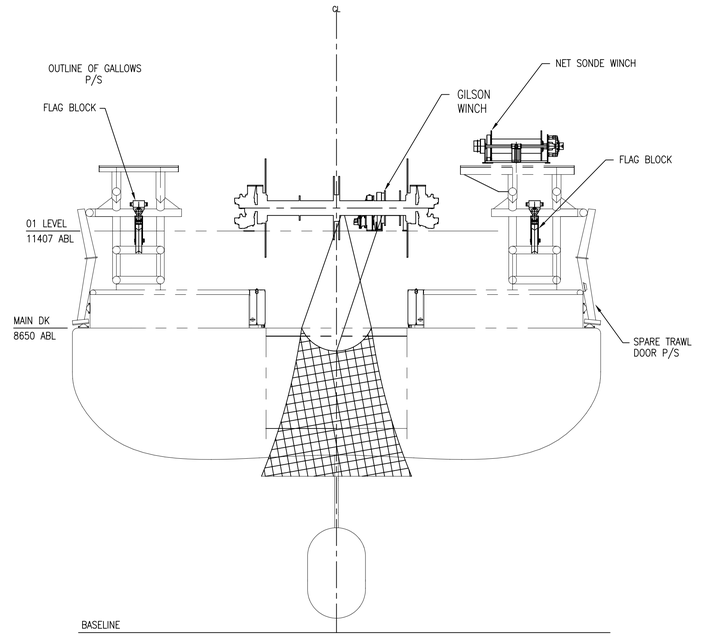
PLOT: 1=80



PLAN VIEW
NET REEL/GILSON WINCH
OPERATIONS (NET RETRIEVAL)



SIDE ELEVATION
NET REEL/GILSON WINCH OPERATIONS (NET RETRIEVAL)

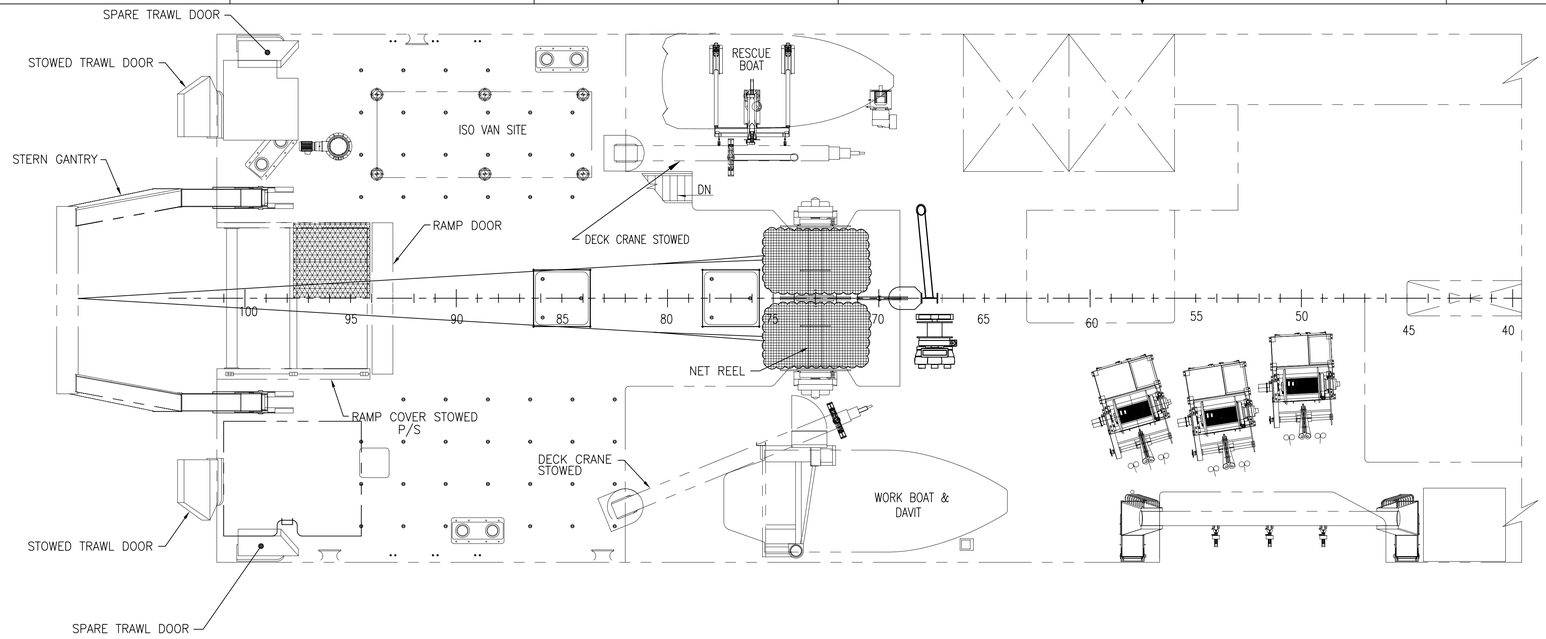


LOOKING FWD
NET REEL/GILSON WINCH OPERATIONS
(NET RETRIEVAL)
STERN GANTRY AND STOWED TRAWL DOORS
REMOVED FOR CLARITY

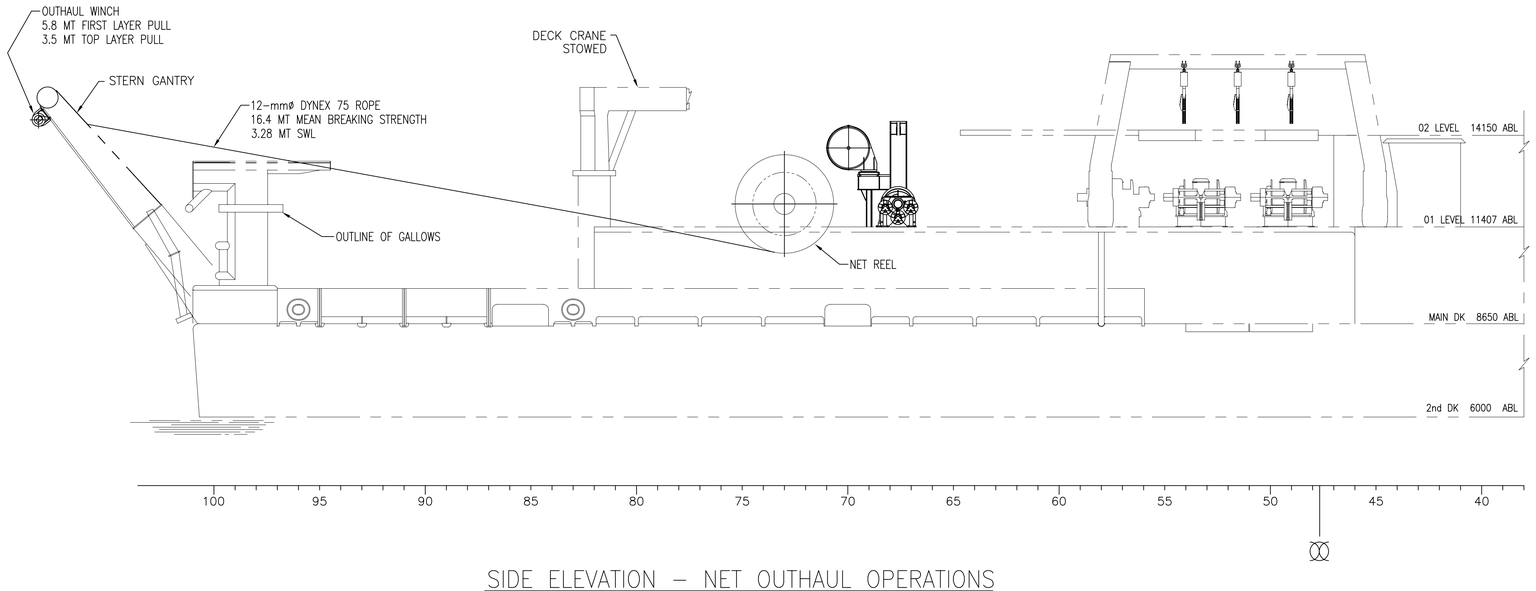
DWG NO. M279-085-FZ30 SH 13

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	013	00
ESTIMATE NO	SCALE		FILE			SHEET 13 OF	
00-104	1:80						

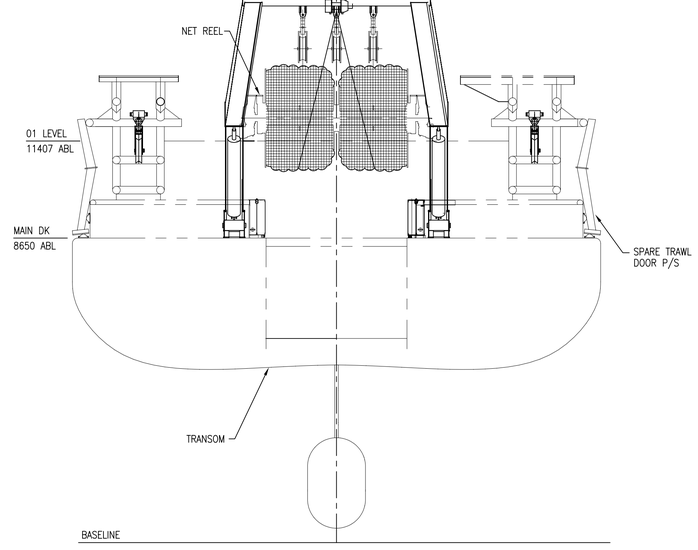
PLOT: 1=80



PLAN VIEW – NET OUTHAUL OPERATIONS



SIDE ELEVATION – NET OUTHAUL OPERATIONS

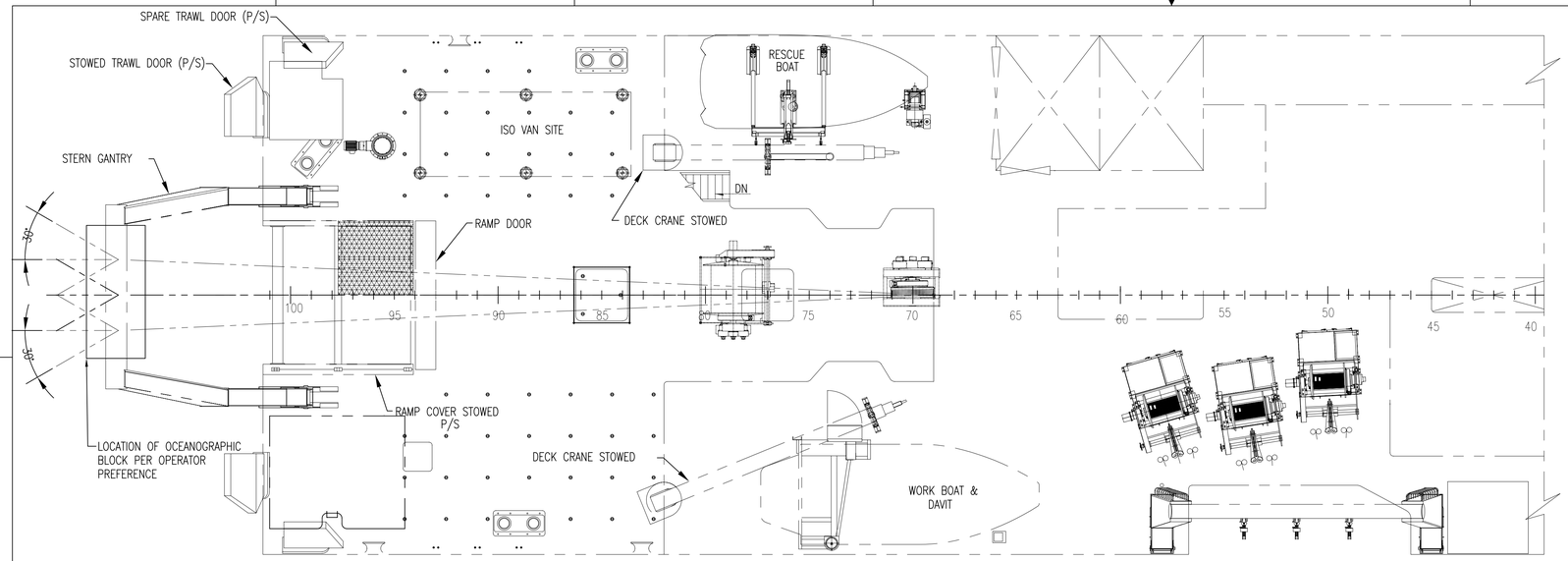


LOOKING FWD
NET OUTHAUL OPERATIONS

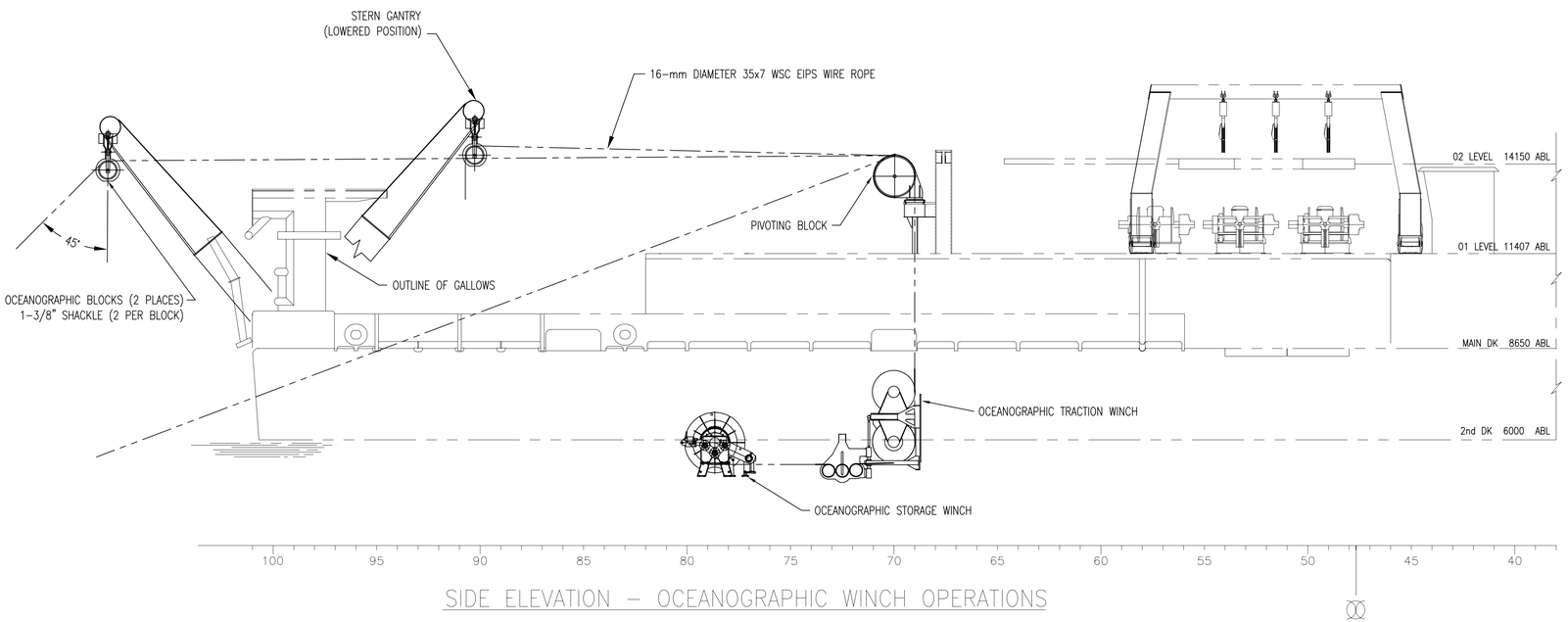
DWG NO. M279–085–FZ30 SH 14

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	014	00
ESTIMATE NO	SCALE		FILE			SHEET 14 OF	
00–104	1:80						

PLOT: 1=80



PLAN VIEW
OCEANOGRAPHIC WINCH OPERATIONS

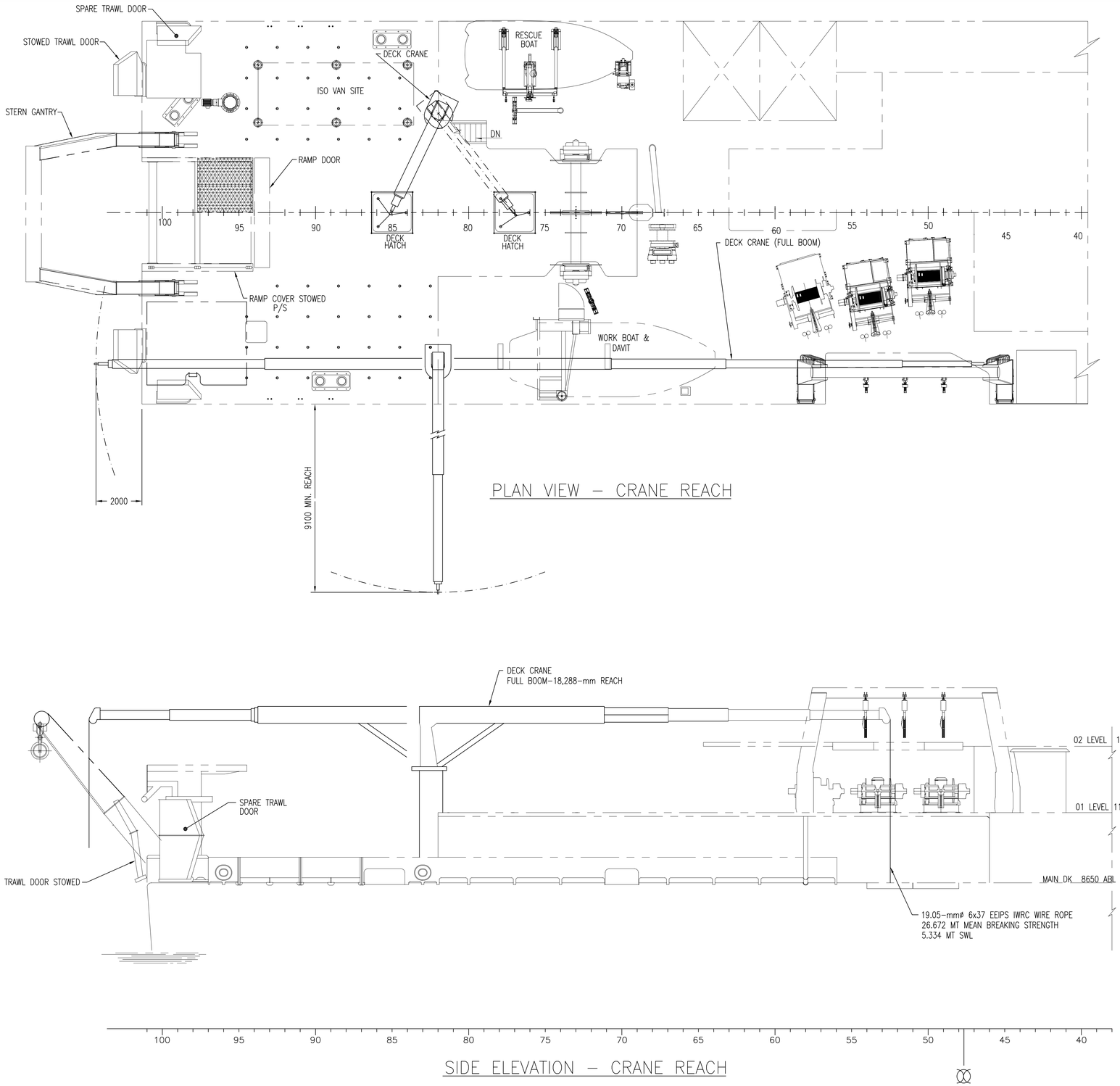


SIDE ELEVATION – OCEANOGRAPHIC WINCH OPERATIONS

DWG NO. M279-085-FZ30 SH 15

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	015	00
ESTIMATE NO	SCALE						
00-104	1:80		FILE			SHEET 15 OF	

PLOT: 1=80



PLAN VIEW – CRANE REACH

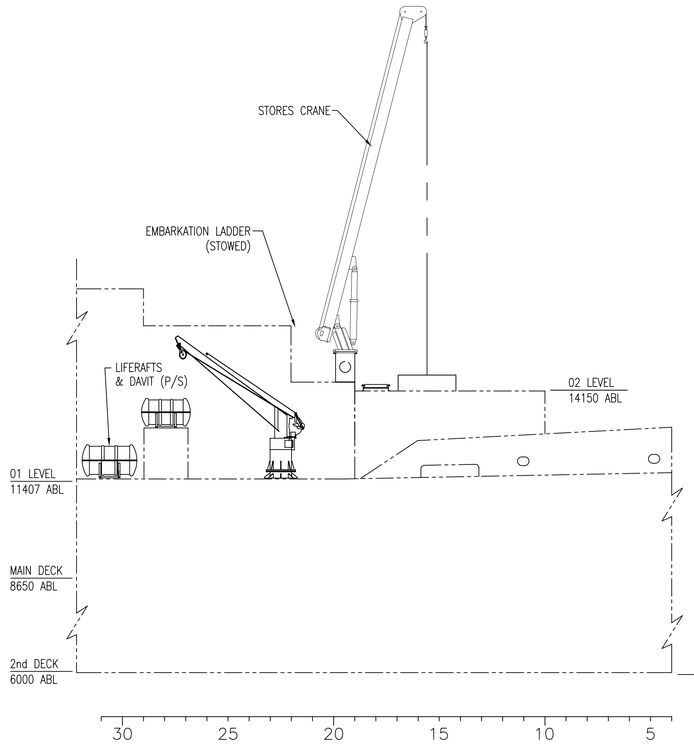
LOADCHART FOR AFT DECK CRANES				
OUTREACH	2.5-m SEAS			4.0-m SEAS, BOOM RETRACTED
	DOCKSIDE STATIC CAPACITY (KG)	AT SEA, ON VESSEL CAPACITY (KG)	AT SEA, OFF VESSEL CAPACITY (KG)	AT SEA, ON VESSEL CAPACITY (KG)
5	4,499.682	3,636.034	1,587.590	3,674.136
10	4,499.682	3,636.034	1,587.590	3,674.136
15	4,499.682	3,636.034	1,587.590	3,674.136
20	4,499.682	3,636.034	1,587.590	3,674.136
25	3,624.240	2,100.154	1,199.764	2,766.942
30	3,624.240	2,100.154	1,199.764	
35	3,624.240	2,100.154	1,199.764	
40	3,624.240	2,100.154	1,199.764	
45	2,100.154	1,356.255	948.018	
50	2,100.154	1,356.255	948.018	
55	1,356.255	875.442	780.187	
60	1,356.255	875.442	780.187	

SIDE ELEVATION – CRANE REACH

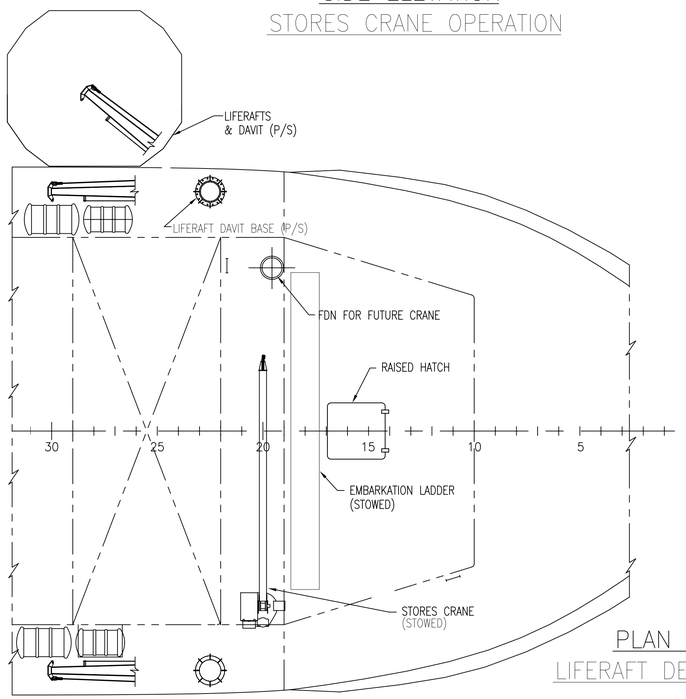
DWG NO. M279–085–FZ30 SH 16

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	016	00
ESTIMATE NO	SCALE		FILE			SHEET 16 OF	
00–104	1:80						

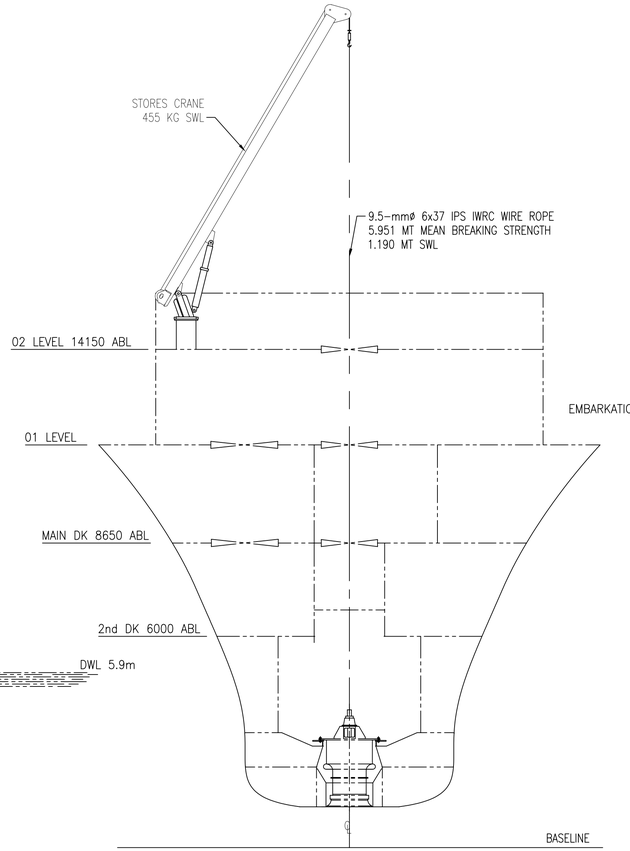
PLOT: 1=80



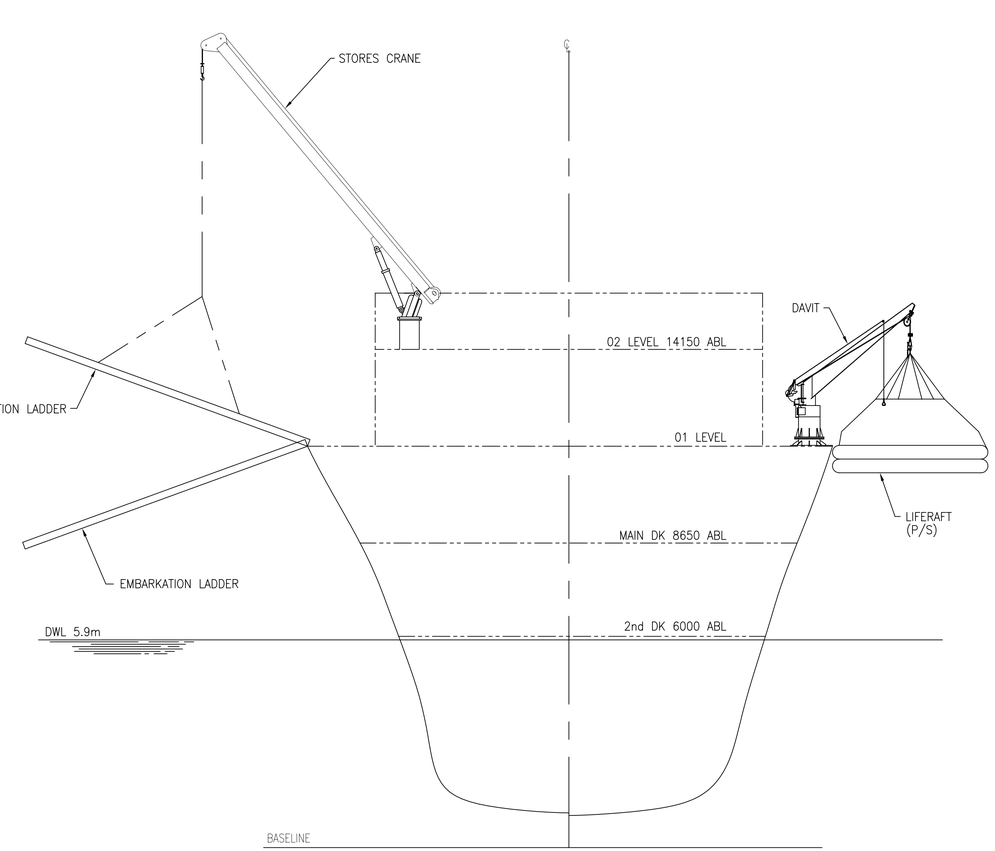
SIDE ELEVATION
STORES CRANE OPERATION



PLAN VIEW
LIFERAFT DEPLOYMENT



FR 16
STORES CRANE OPERATION



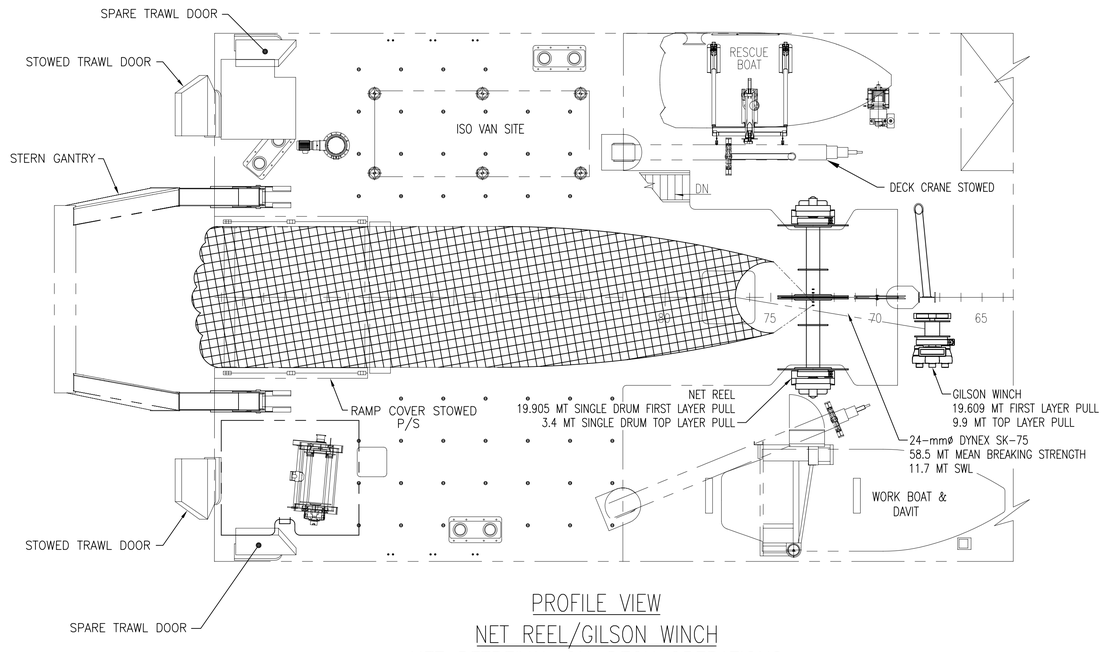
FR 19
LOOKING AFT
EMBARKATION LADDER OPERATION

FR 25
LOOKING AFT
LIFERAFT DEPLOYMENT

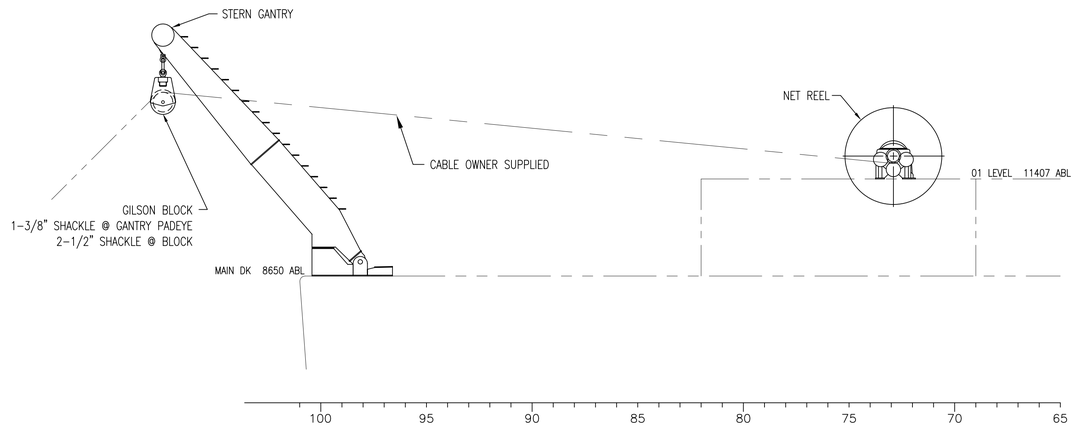
DWG NO. M279-085-FZ30 SH 17

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	017	00
ESTIMATE NO	SCALE						
00-104	1:80		FILE			SHEET 17 OF	

PLOT: 1=80



PROFILE VIEW
NET REEL/GILSON WINCH
NET RETREIVAL ON-DECK OPERATIONS

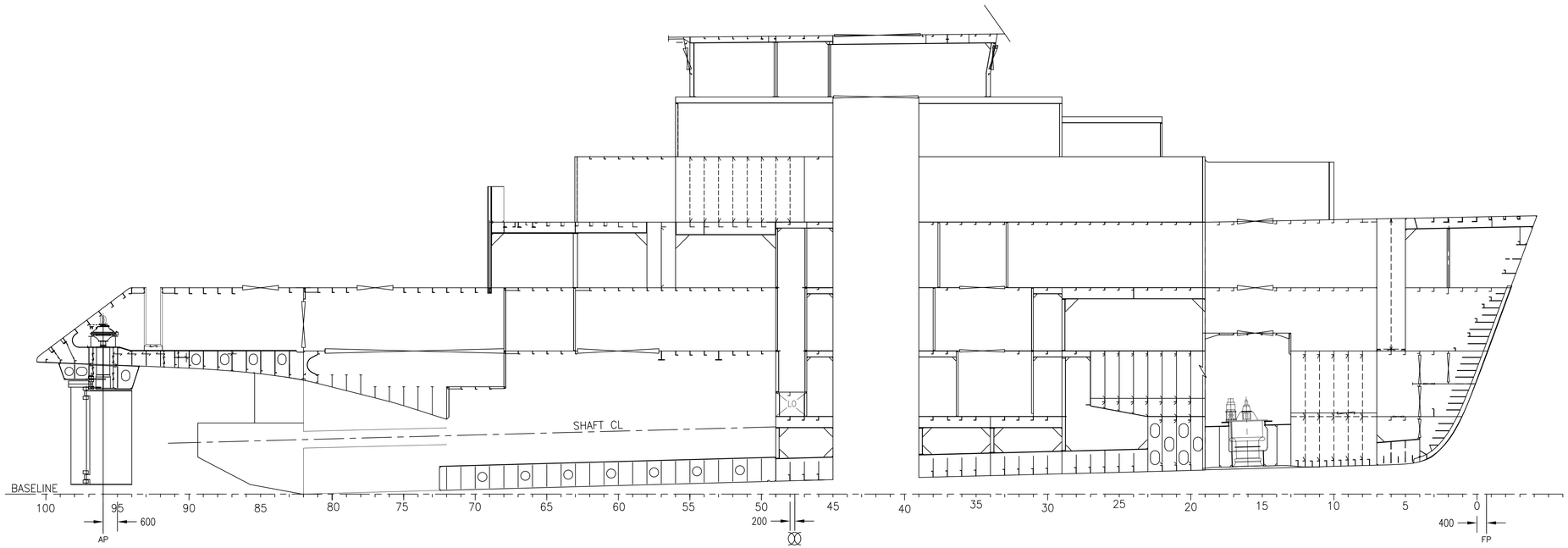


PROFILE VIEW
NET REEL/STERN GANTRY
AFT DEPLOYMENT OPERATIONS

DWG NO. M279-085-FZ30 SH 18

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	018	00
ESTIMATE NO	SCALE		FILE			SHEET 18 OF	
00-104	1:80						

PLOT: 1=80

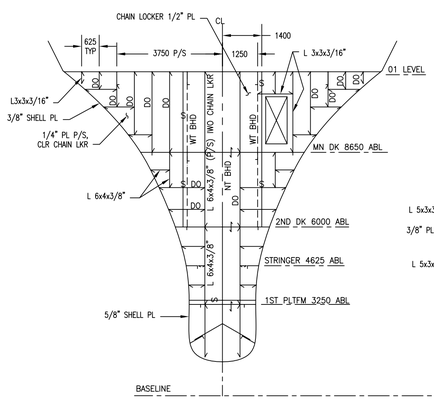


INBOARD PROFILE @ CL

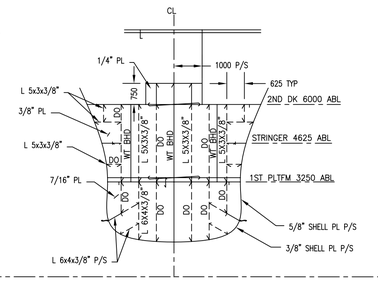
DWG. NO. M279-085-FZ30 SH 19

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	019	00
ESTIMATE NO	SCALE		FILE			SHEET 19 OF	
00-104	1:100						

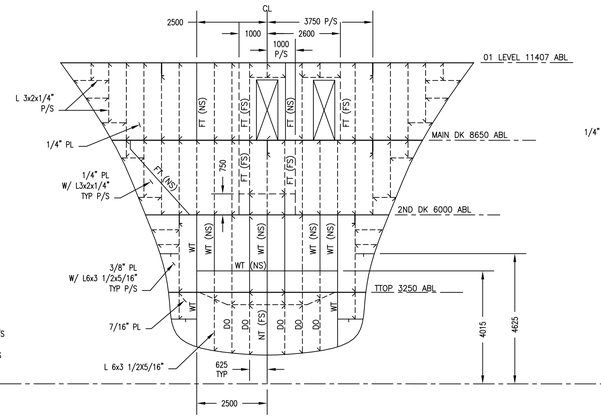
PLOT: 1=100



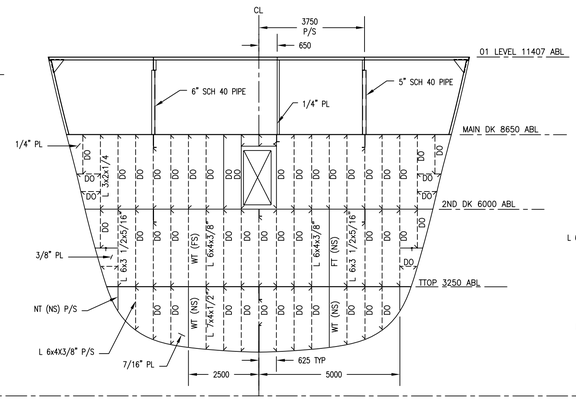
FRAME 7
LKG FWD



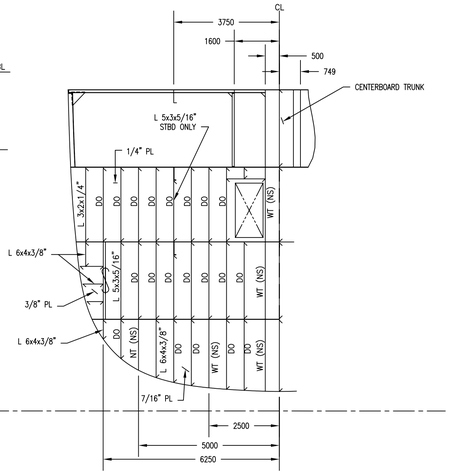
FRAME 13
LKG FWD



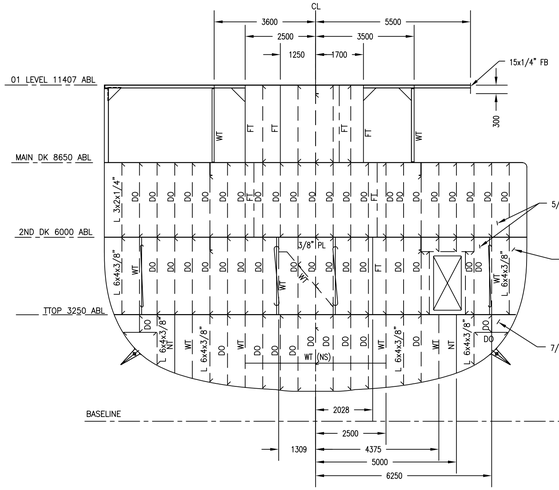
FRAME 19
LKG FWD



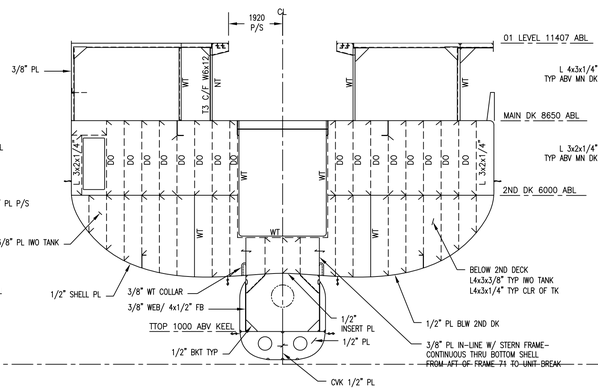
FRAME 29
LKG FWD



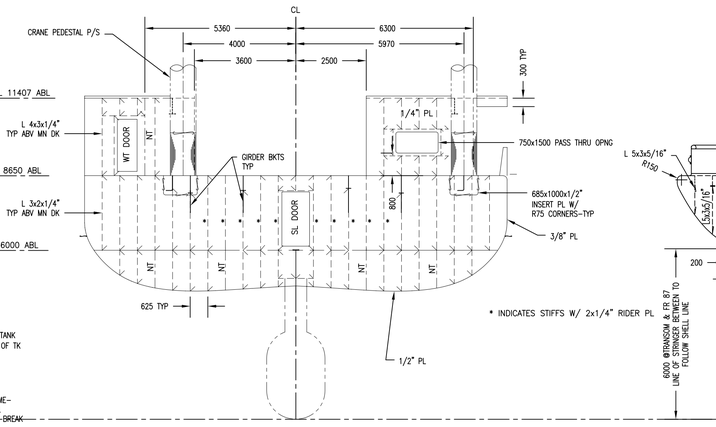
FRAME 39
LKG FWD, STBD SIM



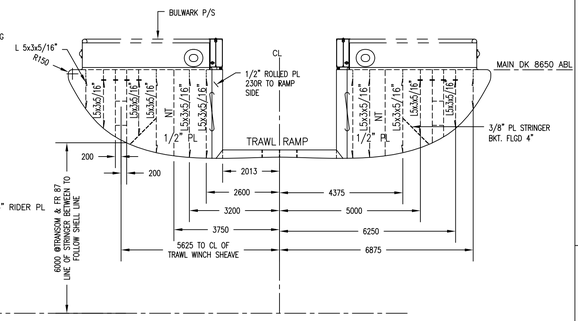
FRAME 49
LKG FWD


1920 P/S
CL
01 LEVEL 11407 ABL
3/8" PL
13 C/F W16x17
MAIN DK 8650 ABL
L 3x2x1/4"
L 3x2x1/4"
2ND DK 6000 ABL
3/8" PL IWO TANK
1/2" SHELL PL
3/8" WT COLLAR
3/8" WEB/ 4x1/2" FB
TTOP 1000 ABV KEEL
1/2" BKT TYP
1/2" INSERT PL
1/2" PL
CVK 1/2" PL
BELOW 2ND DECK L4x3x3/8" TYP IWO TANK L4x3x1/4" TYP CLR OF TK
1/2" PL BLW 2ND DK
3/8" PL IN-LINE W/ STERN FRAME- CONTINUOUS THRU BOTTOM SHELL FROM AFT OF FRAME 71 TO UNIT BREAK

FRAME 72
LKG FWD



FRAME 82
LKG FWD



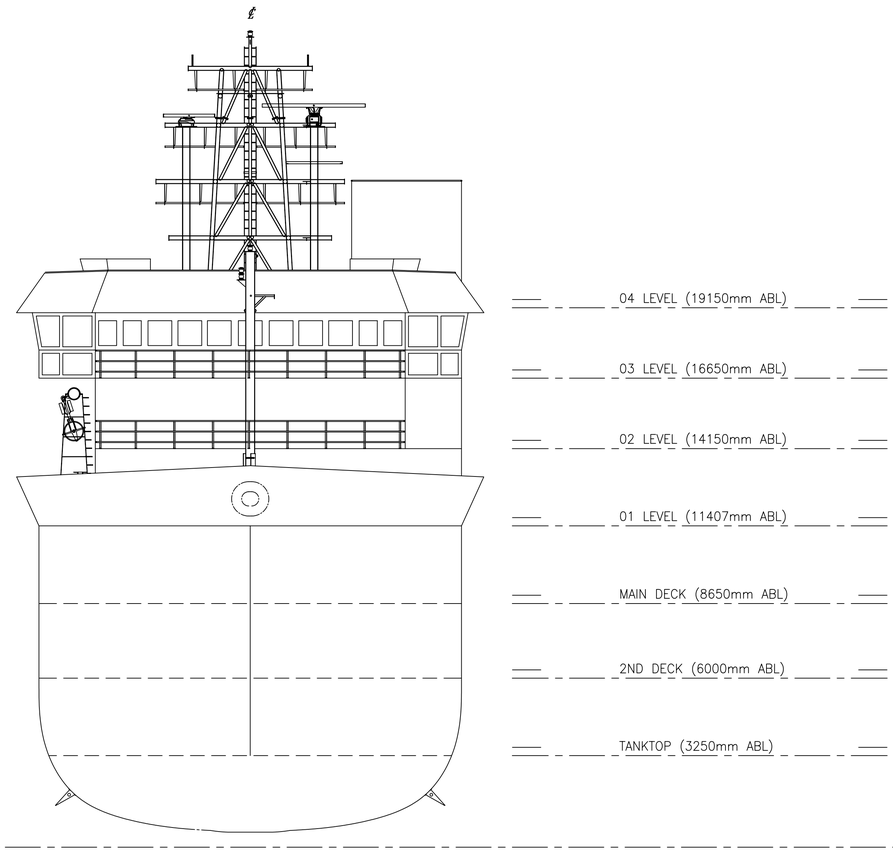
TRANSOM
LKG FWD

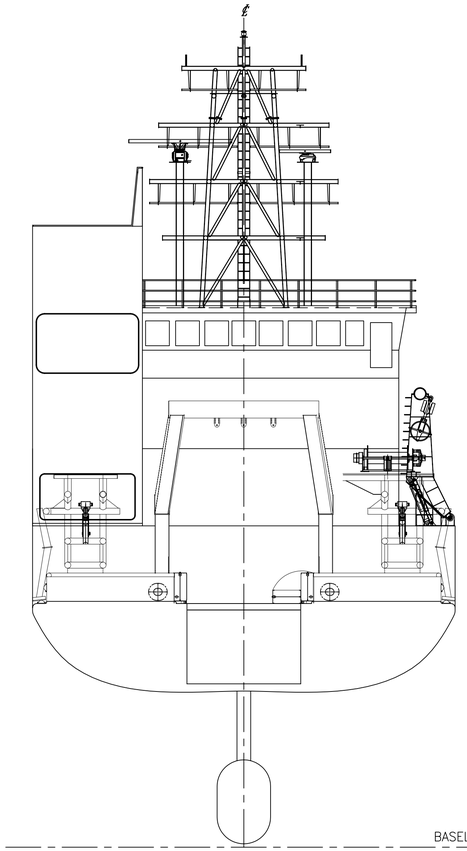
MAJOR TRANSVERSE SECTIONS

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	020	00
ESTIMATE NO	SCALE		FILE			SHEET 20 OF	
00-104	1:100						

PLOT: 1=100

DWG NO. M279-085-FZ30 SH 20





04 LEVEL (19150mm ABL)

03 LEVEL (16650mm ABL)

02 LEVEL (14150mm ABL)

01 LEVEL (11407mm ABL)

MAIN DECK (8650mm ABL)

2ND DECK (6000mm ABL)

TANKTOP (3250mm ABL)

BASELINE

BASELINE

BOW SECTION

STERN SECTION
TRANSOM LKG FWD

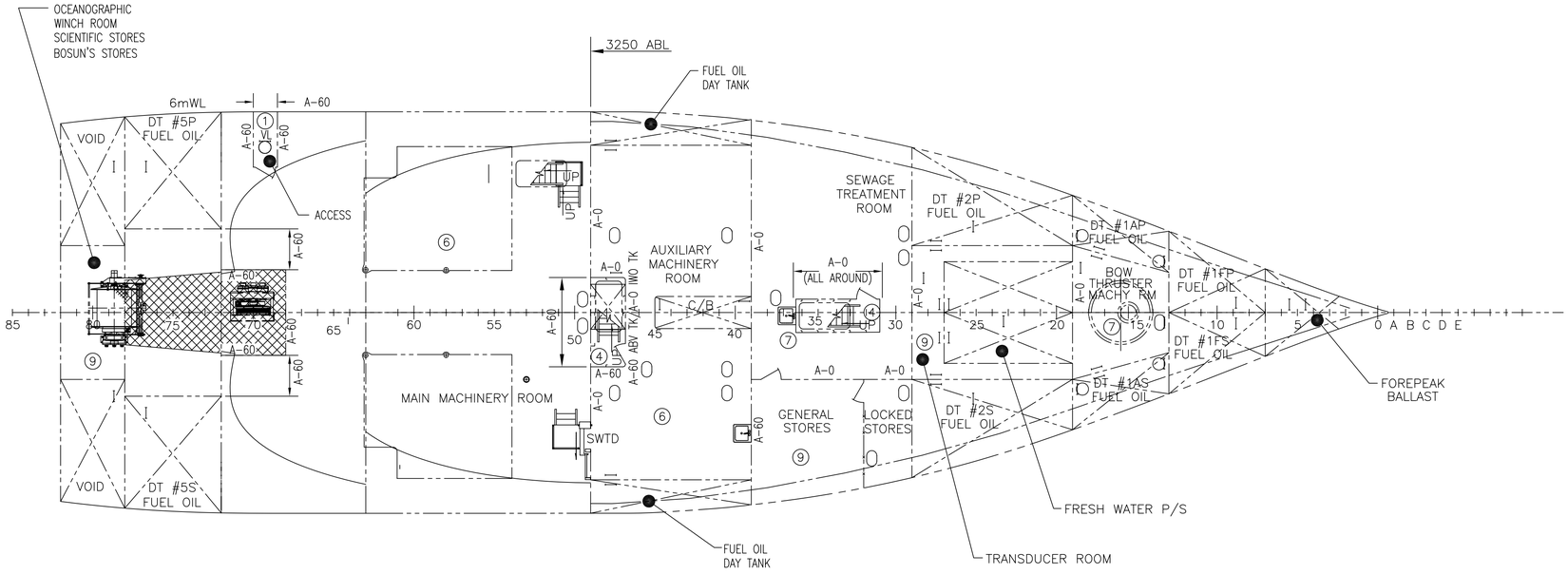
DWG NO. M279-085-FZ30 SH 21

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	021	00
ESTIMATE NO	SCALE		FILE			SHEET 21 OF	
00-104	1:100						

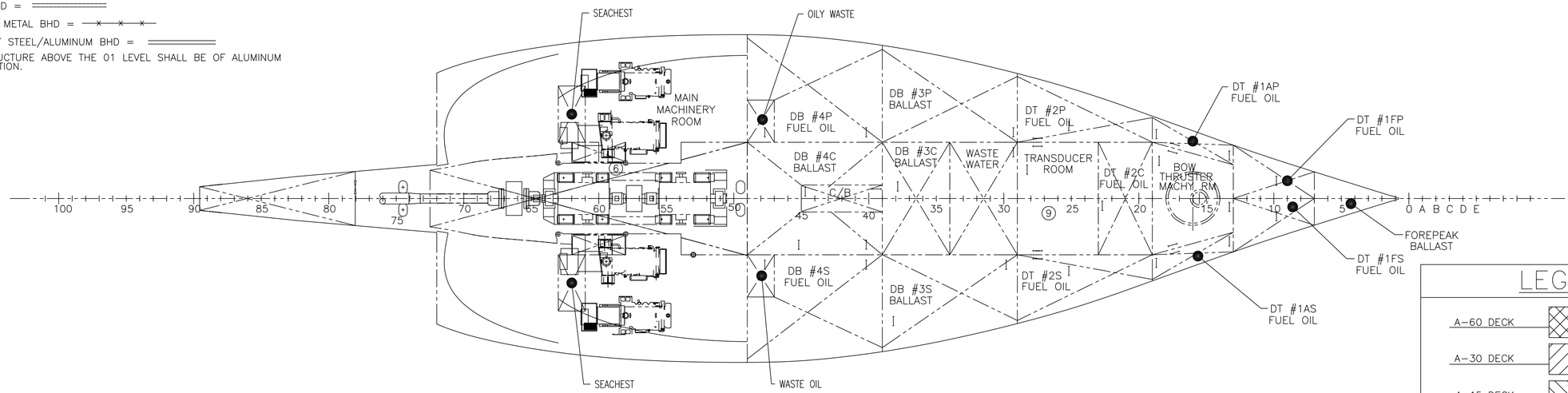
PLOT: 1=100

GENERAL NOTES:

1. ALL DECKS A-0 RATED UNLESS NOTED OTHERWISE.
2. A NUMBER IN THE CIRCLE (X) INDICATES SOLAS SPACE DESIGNATION TO DETERMINE BHDS & DECKS FIRE INTEGRITY.
3. INSULATION SHOWN CROSS HATCHED IS FOR THE UNDERSIDE OF THE DECK. SEE LEGEND FOR HATCHING DEFINITION.
4. METHOD OF PROTECTION FROM SOLAS CHAPTER II-2, REGULATION NO. 42 IS METHOD IC FOR ACCOMMODATIONS AND SERVICE SPACES.
5. DOORS, HATCHES AND PENETRATIONS SHALL HAVE THE SAME FIRE INTEGRITY AS THE BULKHEAD OR DECK IN WHICH THEY ARE INSTALLED UNLESS NOTED OTHERWISE.
6. STAIRS WHICH PENETRATE MORE THAN A SINGLE DECK SHALL BE SURROUNDED BY AT LEAST "A-0" CLASS DIVISIONS & BE PROTECTED BY SELF-CLOSING DOORS AT ALL LEVELS.
7. ALL BHDS WITHIN THE ACCOMMODATION & SERVICE SPACES REQUIRED TO BE "B" CLASS DIVISIONS SHALL EXTEND FROM DECK TO DECK & TO THE SHELL OR OTHER BOUNDARIES, UNLESS "B" CLASS CEILINGS OR LININGS ARE FITTED ON BOTH SIDES OF THE BHD IN WHICH CASE THE BHD MAY TERMINATE AT THE CONTINUOUS CEILING OR LINING.
8. ALL STRUCTUAL BULKHEADS, STANCHIONS, & DECKS IN ALUMINIUM HOUSE TO BE INSULATED IAW SNAME T&R BULLETIN 2-21 "ALUMINUM FIRE PROTECTION GUIDELINES" TO OBTAIN THE PROPER STRUCTURAL FIRE PROTECTION RATINGS. REF 3 PROVIDES THE THE NECESSARY INSULATION INSTALLATION PRO-CEDURES FOR ALUMINUM SUPERSTRUCTURES.
9. ALL ABREVIATIONS ARE IN ACCORDANCE WITH MIL-STD 12D. EXCEPT AS FOLLOWS.
   BERP= BOLTED EQUIPMENT REMOVAL PLATE
   WERP= WELDED EQUIPMENT REMOVAL PLATE
   EOS= ENGINEER'S OPERATING STATION
   MMR= MAIN MACHINERY ROOM
10. BULKHEADS ARE TO BE IDENTIFIED AS FOLLOWS:
    STEEL/ALUMINIUM BHD = ————————
    STEEL/ALUMINUM BHD = ═══════
    (W/JOINER LINING)
    JOINER BHD = ═══════
    EXPANDED METAL BHD = —×—×—×—
    NON-TIGHT STEEL/ALUMINUM BHD = ═══════
11. SUPERSTRUCTURE ABOVE THE 01 LEVEL SHALL BE OF ALUMINUM CONSTRUCTION.



TANKTOP



INNERBOTTOM

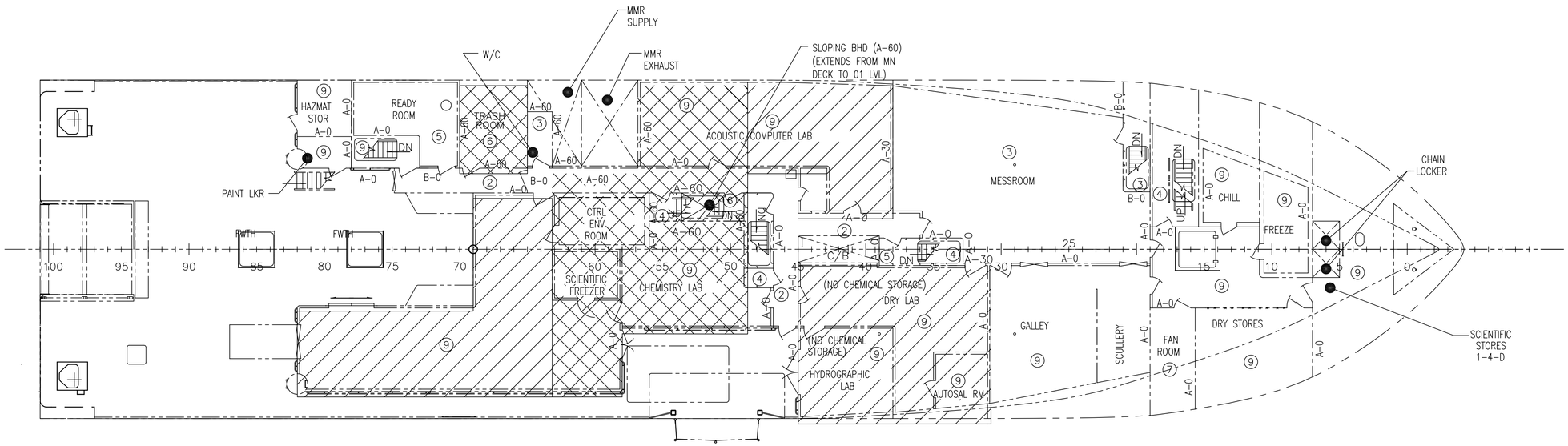
LEGEND

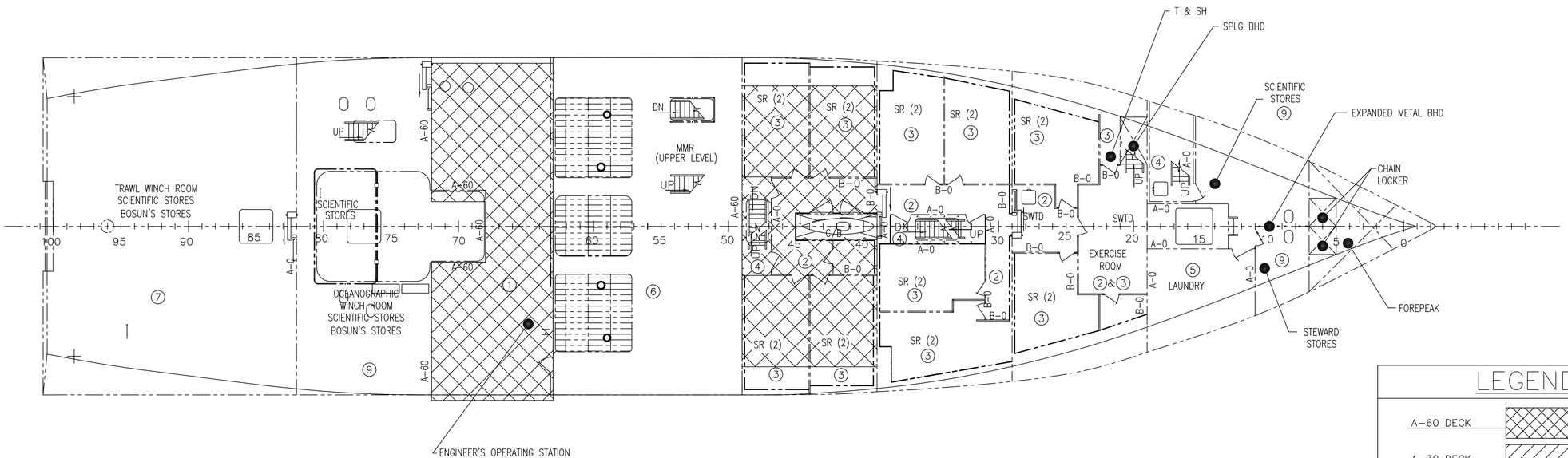
- A-60 DECK
- A-30 DECK
- A-15 DECK

DWG NO. M279-085-FZ30 SH 22

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	022	00
ESTIMATE NO	SCALE		FILE			SHEET 22 OF	
00-104	1:100						

PLOT: 1=100





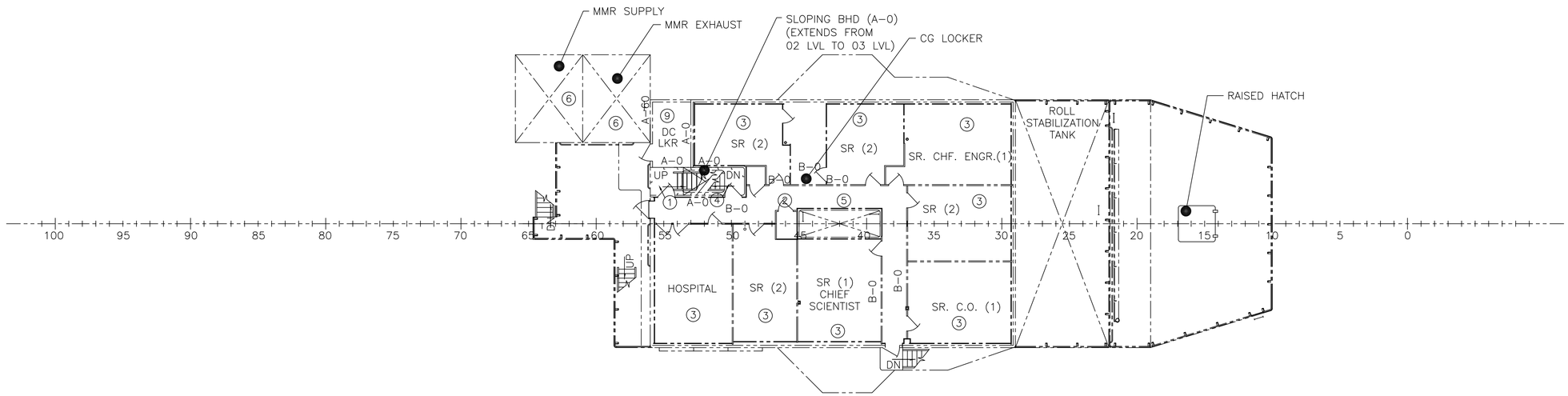
LEGEND

- A-60 DECK
- A-30 DECK
- A-15 DECK

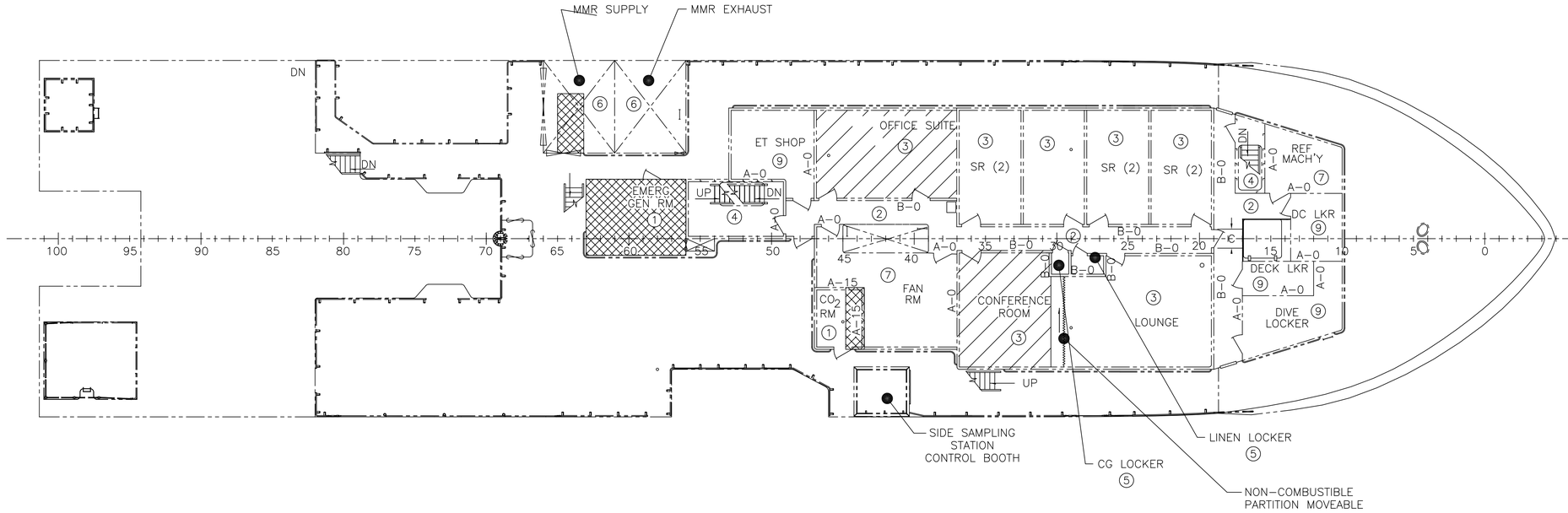
DWG NO. M279-085-FZ30 SH 23

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	023	00
ESTIMATE NO	SCALE		FILE			SHEET 23 OF	
00-104	1:100						

PLOT: 1=100



02 LEVEL



01 LEVEL

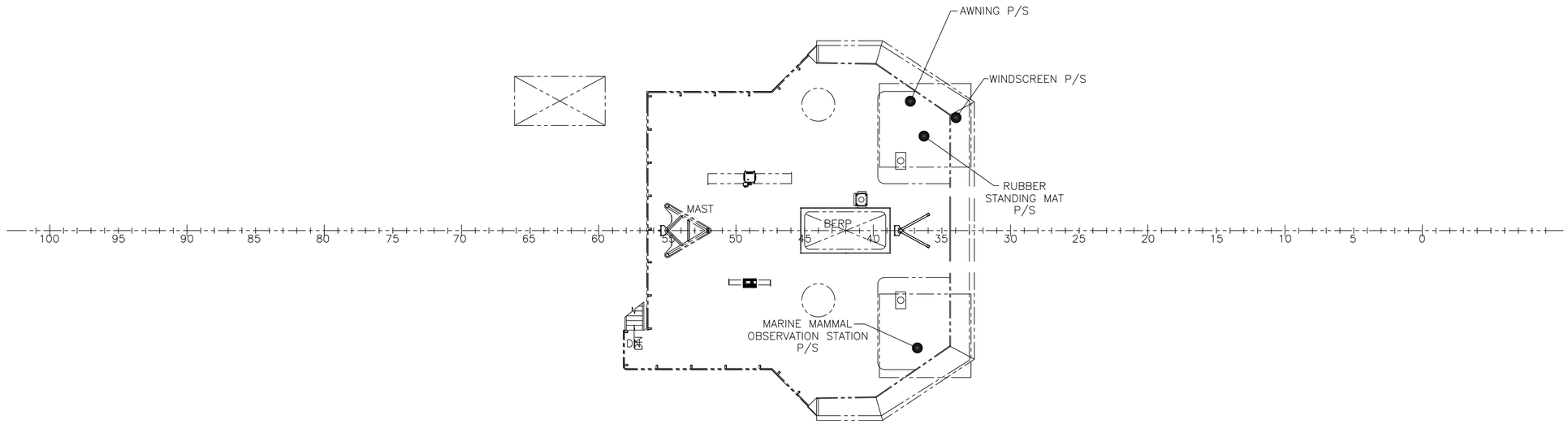
LEGEND

- A-60 DECK
- A-30 DECK
- A-15 DECK

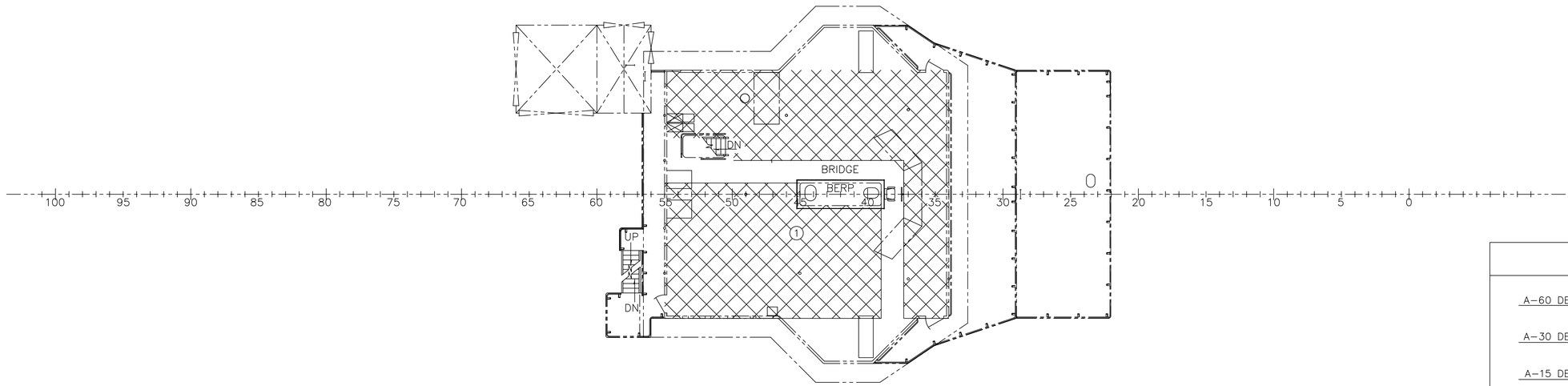
DWG NO. M279-085-FZ30 SH 24

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	024	00
ESTIMATE NO	SCALE		FILE			SHEET 24 OF	
00-104	1:100						

PLOT: 1=100



04 LEVEL



03 LEVEL

LEGEND

- A–60 DECK
- A–30 DECK
- A–15 DECK

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	025	00
ESTIMATE NO	SCALE		FILE			SHEET 25 OF	
00–104	1:100						

PLOT: 1=100

DWG NO. M279–085–FZ30 SH 25

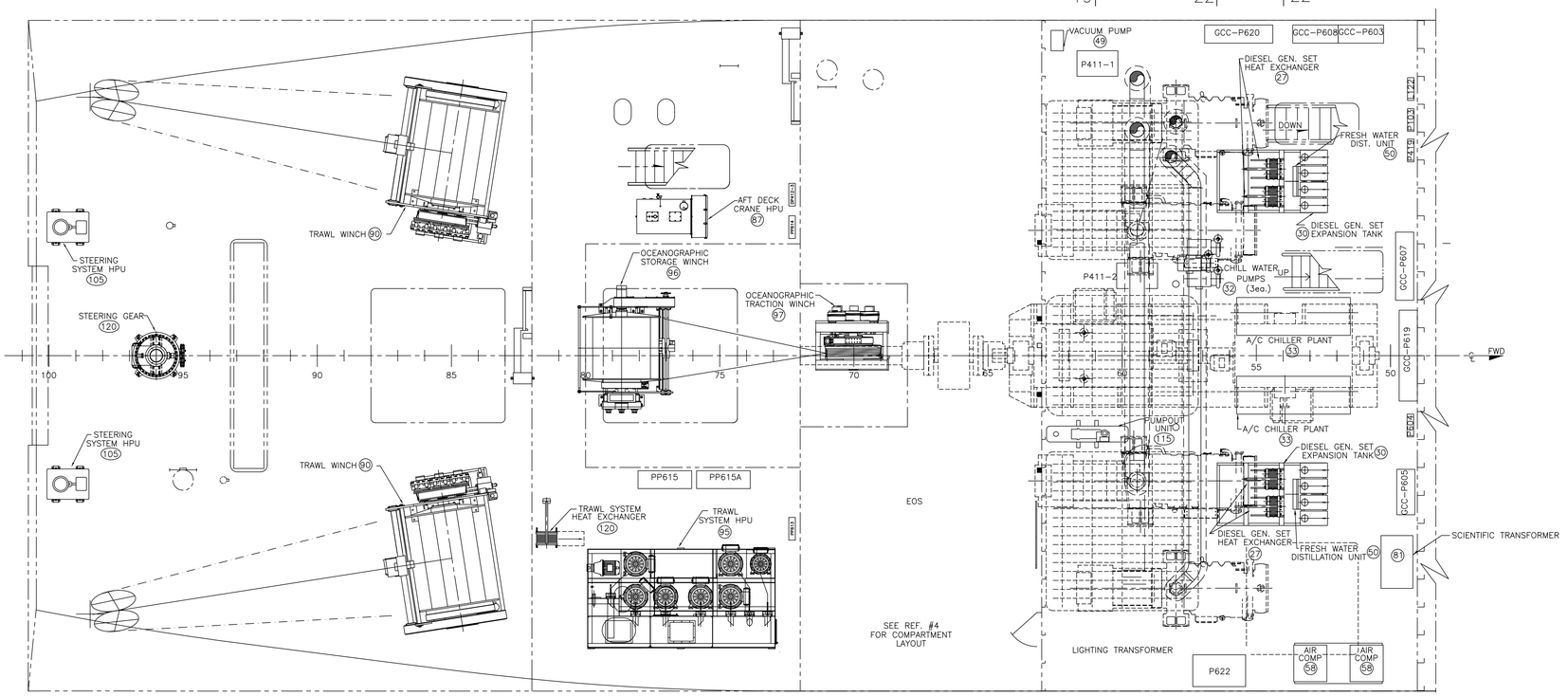
1	2	DIESEL GENERATOR SET (1360 KW)	MMR	CATERPILLAR	3512B DITA SCAC	DIESEL DRIVEN, RESILIENTLY RAFTED	12,697
2	2	DIESEL GENERATOR SET (910 KW)	MMR	CATERPILLAR	3508B DITA SCAC	DIESEL DRIVEN, RESILIENTLY RAFTED	10,250
3	4	DIESEL GENERATOR SET JACKET WATER HEATER	MMR	CATERPILLAR	N/A	12kw,480V 1 PH 60HZ,(2 PER ENGINE)	
4	4	DIESEL GENERATOR SET FUEL OIL HEATER	MMR	CHROMALOX	NWHO-182VFW1E4XX	25kw, 600V 3PH 60HZ, MOD.4468-302XXX CONTROL BOX,	
5	1	ELECTRIC PROPULSION SYSTEM	MMR	ANSALDO	SEE REMARKS	DHT Z73 FDA SCO/60H	76000
6	4	PROPULSION TRANSFORMERS	MMR	ANSALDO	TNT-6HN-4x419K/N	SEE REFERENCE #6	6700
7	2	PROPULSION SCR DRIVE	EOS	ANSALDO	24 PULSE	SEE REFERENCE #6	4000
8		NOT USED					
9	1	EMERGENCY DIESEL GENERATOR (170 KW)	EMERG GEN RM	CATERPILLAR	3306 DITA	DIESEL DRIVEN	2000
10	1	EMERGENCY DIESEL GENERATOR SILENCER (3306B)	EMERG GEN RM	HARCO	1460VCSA5SI	5", SPARK ARRESTING	90
11	2	DIESEL GENERATOR SET SILENCER (3512B)	STACK	HARCO	3088VCSA14	14", SPARK ARRESTING	403
12	2	DIESEL GENERATOR SET SILENCER (3508B)	STACK	HARCO	2882VCSA12	12", SPARK ARRESTING,	323
13	4	DIESEL GENERATOR SET TRIPLEX FUEL OIL FILTERS	MMR	RACOR	79-1000 MAV	FURNISHED WITH GENERATOR SET	14.5
14	1	EMERG DIESEL GENERATOR DUPLEX FUEL OIL FILTER	EMERG GEN RM	RACOR	75-500 MAX	FURNISHED WITH GENERATOR SET	11.4
15	1	FUEL OIL TRANSFER PUMP	AMR	ROPER	26 AE 54	1200 RPM, 13.63M^3/HR ,340 kPa	107
16	2	FUEL OIL PURIFIER	AMR	ALFA-LAVAL	PU 100		455
17	1	FUEL OIL MANFOLD	AMR	YOUNG/CUNNINGHAM		22 VALVE-2" DUPLEX (1-6VLV,1-5VLV)	707.6
18	1	LUBE OIL TRANSFER PUMP	MMR	ROPER	18 AM 06	0.56KW1200 RPM 1.6 M^3/HR@ TDH=35.9 M	71
19	1	LUBE OIL HAND PUMP	MMR	BLACKMER	PA-414B		8
20	1	WASTE OIL TRANSFER PUMP	MMR	ROPER	18 AM 06	0.56KW1200 RPM 1.6 M^3/HR@ TDH=35.9 M	71
21	1	WASTE OIL CIRCULATING PUMP	AMR	ROPER	18 AM 06	0.56KW1200 RPM 1.6 M^3/HR@ TDH=35.9 M	71
22	1	OILY WATER SEPARATOR	MMR	HELI-SEP	500	WET EIGHT	170
23	1	OILY WATER CONTENT MONITOR	MMR	HELI-SEP		ON OILY WATER SEPARATOR	
24	1	WASTE WATER DISCHARGE PUMP	DES			VENDOR FURNISHED / ON MSD	
25	1	MARINE SANITATION DEVICE	DES	SCIENCO/FAST	MX5S	40 MAN CAPACITY / OPERATING WIEGHT	8000
26	1	VACUUM SEWAGE SYSTEM	DES	EVAC		VENDOR FURNISHED / ON MSD	
27	4	DIESEL GENERATOR SET HEAT EXCHANGERS	MMR	ALFA LAVAL	M10-MFG	3508(30PL) AND 3512 (36PL)	372/377
28	2	MAIN SEAWATER COOLING PUMP	MMR	AURORA	SERIES 361A 6X6X11A	22.4KW@1750 RPM 250M^3/HR TDH=24.3M	274
29	2	MAIN SEAWATER DUPLEX STRAINER	MMR	MUELLER	692 MFB	DN 200, DUPLEX W/ 1/10" MESH SS BASKET	619
30	8	DIESEL GENERATOR SET EXPANSION TANK	MMR			YARD TO FABRICATE (30L)	
31	2	AUXILIARY SEAWATER COOLING PUMP	MMR	AURORA	SER. 361A 4X5X9B	7.5KW@1750 RPM 110M^3/HR@13.6M TDH	141
32	3	AIR CONDITIONING CHILLED WATER PUMP	MMR	AURORA	SER. 341A 2.5X3X12	22.3KW@1750 RPM 55M^3/HR@42.6M TDH	242
33	2	AIR CONDITIONING CHILLER PLANT	MMR	CARRIER	30HXC076	74.2 TONS,	2586
34	1	CHILLED STOREROOM REFRIGERATION UNIT	RMR	CARRIER	90YR28MSF3ND1K9R	1.8 TONS, 28 CFM @ 1750 RPM,	363
35	1	FREEZE STOREROOM REFRIGERATION UNIT	RMR	CARRIER	90YR28MSF3ND1K9R	1.8 TONS, 28 CFM @ 1750 RPM,	363
36	1	SCIENTIFIC FREEZER REFRIGERATION UNIT	FAN RM	CARRIER	90YR16MSD3ND1K9R	0.98 TONS, 16 CFM @ 1750 RPM	340
37	1	CONTROLLED ENVIRONMENT ROOM REFRIGERATION UNIT	FAN RM	CARRIER	90YK1ZNBD3CA1Z9Z		
38	1	WASTE OIL MANIFOLD	MMR	-	-	YARD TO FABRICATE	
39	1	FIRE PUMP	BTR	AURORA	SER.341A 2.5x3x9	29.8KW@3500RPM80.4M^3/HR@67.4M HD	314
40	5	FIXED CARBON DIOXIDE SYSTEMS	VARIOUS	RC CARTER			
41	1	BILGE / BALLAST / FIRE PUMP	MMR	AURORA	SER.341A 2.5x3x9	2-SPEED,29.8KW1750 RPM, - 44 M^3/HR@ 16M TDH, 3500 RPM-80.4M^3/HR@67.4M HD	293
42	1	BILGE MANIFOLD	MMR	YOUNG/CUNNINGHAM	Y2458-1	10 VALVE-2" SINGLE (2-5VLV)	
43	1	BALLAST / BILGE / FIRE PUMP	AMR	AURORA	SER.341A 2.5x3x9	2-SPEED,29.8KW1750 RPM, - 44 M^3/HR@ 16M TDH, 3500 RPM-80.4M^3/HR@67.4M HD	293
44	1	BALLAST MANIFOLD	AMR	YOUNG/CUNNINGHAM	Y2424-1	10 VALVE-3" DUPLEX (1-10VLV)	308
45	1	SEAWATER WASHDOWN PUMP	MMR	AURORA	SERIES 361A 2.5X3X7B	5.5KW@3500RPM,80M^3/HR@42M TDH	110
46	1	EGG SAMPLING SYSTEM PUMP	MMR	PUMPEX	K80-T-VA3195	3.7KW@1750RPM,38.4M^3/HR@11M TDH	77
47	1	CONTINUUOUS UNDERWAY FISH EGG SAMPLER (CUFES)	WET LAB	OCEAN INSTRUMENTS	CUFES-101	CONCENTRATOR, 0.25 KW	68
48	2	SCIENTIFIC SEAWATER SYSTEM PUMP	BTR	WEBSTER	C10	3.7KW@3450RPM,8.5M^3/HR@32.05M TDH	
49	1	VACUUM PUMP	MMR	PREVAC	GPR-28	1.1KW@1750RPM,22.M^3/HR@21in Hg	
50	2	FRESH WATER DISTILLATION UNIT	MMR	ALFA-LAVAL	JWP-16-C40	7 METRIC TONS PER DAY CAPACITY	360
51	1	POTABLE WATER BLADDER TANK	DES	CLAYTON MARK	CM22050	412 L CAPACITY	86
52	2	POTABLE WATER PRESSURE PUMP	DES	AMPCO	KC2 1.25x1x5.5	1.5KW@3500 RPM, 6M^3/HR@36M TDH	69
53	2	WATER HEATER	DES	AO SMITH	DSE-120	454 L CAPACITY	190
54	2	HOT WATER RECIRC PUMPS	DES	AMPCO	KC2 1x.75x5	0.4KW@1750RPM, 3M^3/HR@6.7M TDH	35
55	1	ULTRAVIOLET PURIFIER	DES	AQUAFINE	RBE-4R	9M^3/HR @10 BAR	150
56	2	BATTERY CHARGER	EMERG GEN RM	LA MARCHE	A41-30-24V	SEE REFERENCE #6	30
57	1	WINDOW WASHDOWN TANK	02-48-0	McMASTER-CARR	9888K14	76 L CAPACITY	
58	2	AIR COMPRESSOR	MMR	GRASSAIR	WISI15	1800 RPM, 21 L PER SECOND	340
59	2	AIR RECEIVER	MMR	MANCHESTER	V3024	908.5L PER RECEIVER	310
60	1	DIVER AIR SYSTEM COMPRESSOR	DIVE LOCKER	MAKO	ACI05	OWNER SUPPLIED	

ITEM NO.	QTY	DESCRIPTION	LOCATION	MANUFACTURER/ VENDOR	MODEL #	REMARKS
61	2	MAIN MACHINERY SPACE SUPPLY FAN	MMR SUPPLY TRUNK	VES	100JM	37.3 KW @ 6621 M^3/HR,
62	1	AUXILIARY MACHINERY SPACE SUPPLY FAN	MMR SUPPLY TRUNK	VES	35JM	1.1 KW @ 1053 M^3/HR,
63	2	DOMESTIC EQUIPMENT SPACE SUPPLY FAN	DES	VES	50JM	3.7 KW @ 8979 M^3/HR,
64	1	EMERG. DIESEL GENERATOR ROOM SUPPLY FAN	EMERG GEN RM	VES	31JM	1.1 KW @ 824 M^3/HR,
65	1	BOW THRUSTER ROOM SUPPLY FAN	BTR	VES	45JM	3.7 KW @ 6957 M^3/HR,
66	1	TRASH ROOM SUPPLY FAN	TRASH ROOM	VES	31JM	1.1 KW @ 1911 M^3/HR,
67	1	INCINERATOR	TRASH ROOM	TEAMTEC	TYPE OG200	
68	1	INCINERATOR FLUE GAS EXHAUST FAN	STACK	TEAMTEC	DN 300 H2	
69	1	EMERGENCY SWITCHBOARD	EMERG GEN RM	GULF COAST PWR	N/A	SEE REFERENCE #9
70	1	INCINERATOR SLUDGE TANK	TRASH ROOM	TEAMTEC	435L	UNIT HAS AN ELECT HEATER
~~71~~	~~1~~	~~TRASH COMPACTOR~~	~~TRASH ROOM~~	~~TECH OIL PRODUCTS~~	~~MODEL 950~~	~~ENVIRO PAK~~
72	1	THRUST BEARING	MMR	MICHELL BEARING	QUOTE #9581/00	
73	1	PROPELLER	STERN	BIRD JOHNSON	5344	(HUB & 5 BLADES)
74	1	RUDDER	STERN	BECKER	SC2550/430K.2	
75	1	BOW THRUSTER	BTR	ELLIOT	40T3S	WEIGHT INCL MTR, ROTOR, &THRUSTER
76	1	BOW THRUSTER TRANSFORMER	DES	HILL GRAHAM	N/A	SEE REFERNCE #6
77	1	MAIN CONTROL CONSOLE	EOS	EDI	N/A	SEE REFERNCE #6
78	1	MAIN SWITCHBOARD	EOS	GULF COAST PWR	N/A	SEE REFERNCE #9
79	2	EMERGENCY TRANSFORMER	EMERG GEN RM	POWER MAGNITICS	N/A	SEE REFERNCE #6
80	2	SHIPS SERVICE TRANSFORMERS	VARIUOS	POWER MAGNITICS	N/A	SEE REFERNCE #6
81	7	SCIENTIFIC POWER SYSTEM TRANSFORMERS	VARIUOS	POWER MAGNITICS	N/A	SEE REFERNCE #6
82	1	SHIPS WHISTLE	DECK HOUSE	AIR CHIME	KMJ 45C75-48	1HP,
83	1	STORES HANDLING CRANE	02 LEVEL	APPLETON MARINE	BMD-501	
84	1	MONORAIL HOIST	MAIN DECK	CYCLONE	3287T2	(McMASTER CAR) 998 CAPACITY
85	1	ANCHOR WINDLASS	BOW	TBD	ADW-36MM-40EB	
86	2	AFT DECK CRANES	STERN	APPLETON MARINE	EB70-60-25	
87	2	AFT DECK CRANE HPU	STERN	APPLETON MARINE	EB70-60-25	
88	1	GANTRY	STERN	AMCLYDE	CUSTOM	
89	1	NOT USED				NOT USED
90	2	TRAWL WINCHES	TRW	RAPP-HYDEMA	TWS-7551-36.35	4000M OF 28.6MM 6x37 GEIPS WIRE ROPE,
91	1	NET REEL	01 LEVEL	RAPP-HYDEMA	NDD-40.0/SWDO-4001-20.6	SPLIT NET REEL,
92	1	NET SONDE WINCH	01 LEVEL STERN	RAPP-HYDEMA	SOW-300-0.99	4000M OF 11.4MM TORQUE BALANCED DOUBLE ARMORED ELECTRO- MECHANICAL CABLE,
93	1	OUTHAUL WINCH	01 LEVEL STERN	PULLMASTER	M12-3-97-1	110M OF 13MM SPECTRA ROPE AND OUTHALL HOOK,
94	1	GILSON WINCH	01 LEVEL	RAPP-HYDEMA	GWB-4000-16.94	250M OF 24MM SPECTRA ROPE
95	1	TRAWLING SYSTEM HPU	OWR	RAPP-HYDEMA	CUSTOM	6-128KW PMPS, 1-37KW PMP, 1-8.6KWPMP,
96	1	OCEANOGRAPHIC STORAGE WINCH	OWR	RAPP-HYDEMA	CUSTOM	3500M OF 17MM ELECTROMECHANICAL CABLE,
97	1	OCEANOGRAPHIC TRACTION WINCH	OWR	RAPP-HYDEMA	DTRW-120	DUAL 1220MM ROOT DIAMETER, 6 GROOVE TRACTION WHEELS
98	2	HYDROGRAPHIC WINCH	01 LEVEL	RAPP-HYDEMA	CUSTOM	3500M OF 9.5MM ROCHESTER A216375 CABLE,
99	1	NOT USED				NOT USED
100	1	SIDE SAMPLING STATION HANDLING GEAR	01 LEVEL	RAPP-HYDEMA	TBD	
101	1	SIDE SAMPLING STATION HANDLING GEAR HPU	01 LEVEL	RAPP-HYDEMA	TBD	
102	1	LABORATORY MONORAIL HOIST SYSTEM	VARIOUS LABS	YALE	KEL1/2 10RT60S1	454 CAPACITY
~~103~~	~~1~~	~~GANGWAY WINCH~~	~~MAIN DECK~~	~~ACL INDUSTRIES~~	~~CG-100~~	-
104	5	SLIDING WATERTIGHT DOOR HPU	VARIOUS	IMS	280	SELF CONTAINED HPU
105	2	STEERING SYSTEM HPU	TWR	ROLLS ROYCE	561SG01	
106	1	RESCUE BOAT	01 LEVEL	OCEAN SPRINT	SA3,5	
107	1	RESCUE BOAT DAVIT	01 LEVEL	SCHAT HARDING INC.	OTECH5,6	
108	1	IMPRESSED CURRENT CATHODIC PROTECT SYS	EOS			SEE REFERNCE #6
109	1	GRINDER	ENG WORKSHOP	JET	JBG-10A	STOCK #577103
110	1	DRILL PRESS	ENG WORKSHOP	JET	JDP-20MF	STOCK #354170
111	1	LATHE	ENG WORKSHOP	JET	GHB-1340	STOCK #321357
112	1	ARBOR PRESS	ENG WORKSHOP	JET	BHP-12	STOCK #331412
113	1	MILLING MACHINE	ENG WORKSHOP	JET	JMD-15	STOCK #350017
114	2	SALT WATER EJECTOR FEED PUMP	MMR	ALFA LAVAL	CNL 40-40/200	
115	1	PUMPOUT UNIT	MMR	CARRIER	90C02-1601	
~~116~~	~~1~~	~~LUBE OIL HEAT EXCHANGER (THRUST BEARING)~~	~~MMR~~	~~OIL-RITE~~	~~YC-674~~	~~75 LITER CAPACITY~~
117	1	CENTER BOARD HPU	FAN RM	AMCLYDE		
118	1	AIR RECEIVER	CG LOCKER 02-48-0	McMASTER-CARR	9888K25	114 LITER CAPACITY
119	2	CAPSTAN				
120	1	TRAWL SYSTEM HPU HEAT EXCHANGER	OWR	RAPP-HYDEMA	M10-MFM	WET WEIGHT
121	1	BOOSTER HEATER	FAN RM (1-16-1)	A.O. SMITH	SU-46	DRY WEIGHT

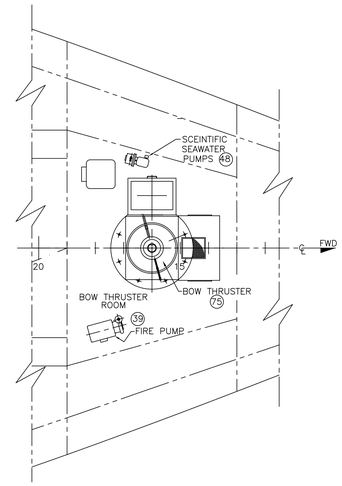
DWG NO. M279-085-FZ30 SH 25

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3B213	D	M279	085	FZ30	026	00
ESTIMATE NO	SCALE		FILE			SHEET 26 OF	
00-104	1:100						

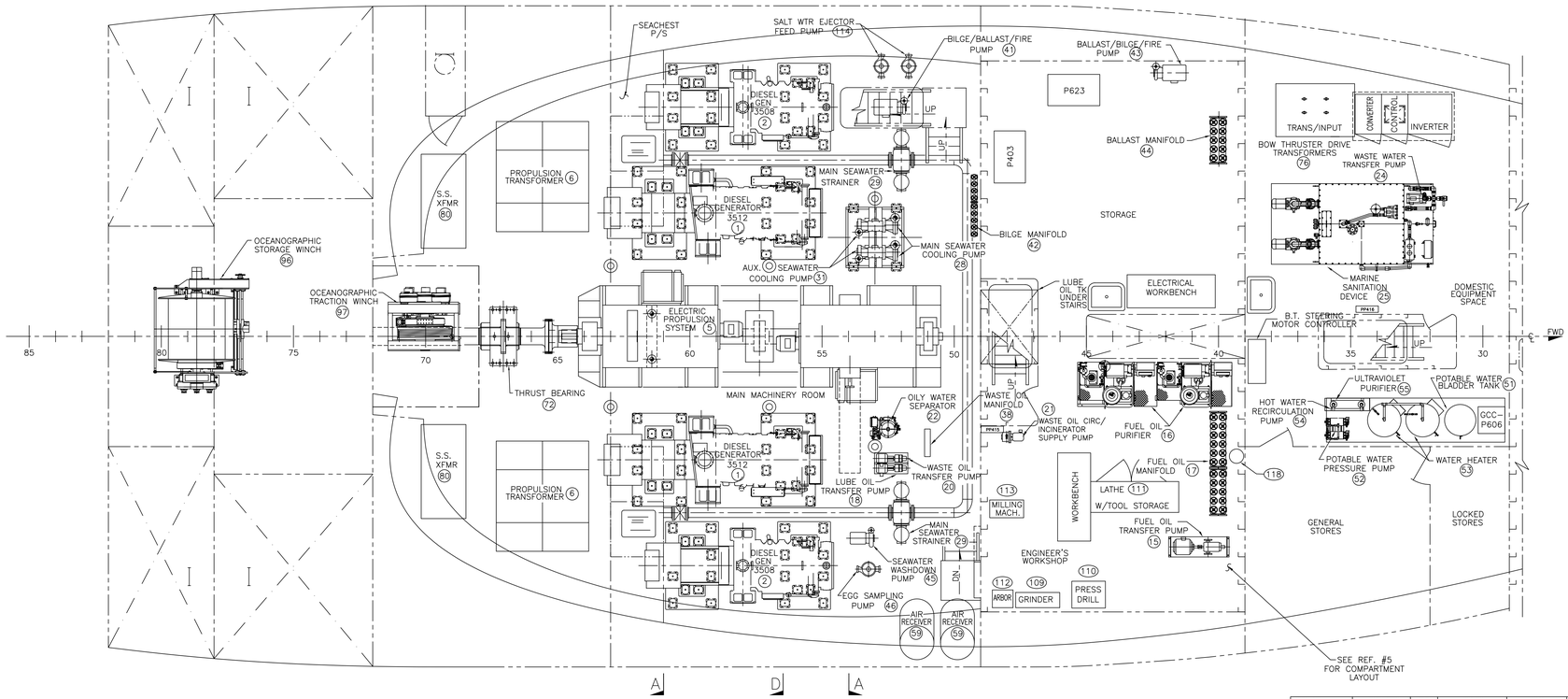
PLOT: 1=100



PLAN 12-D
2ND DECK



PLAN 10-D
TANKTOP

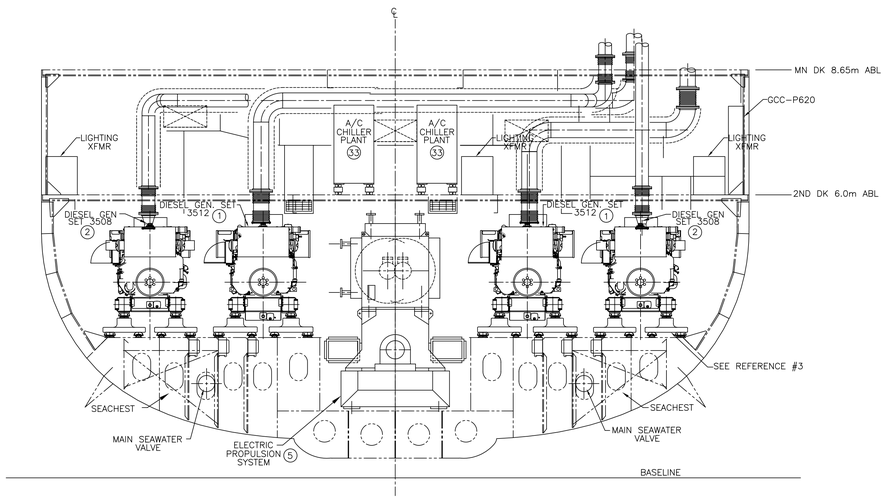


PLAN 12-A
TANKTOP

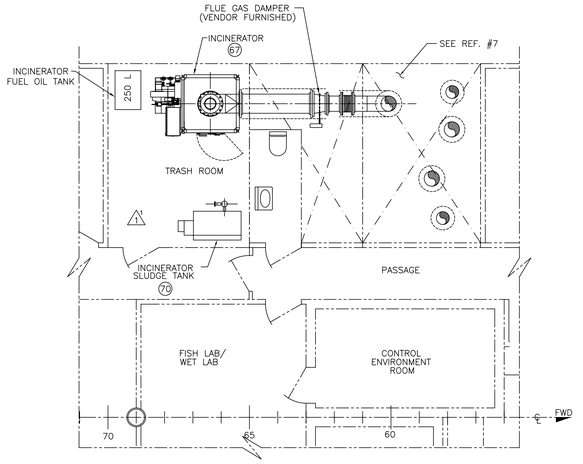
DWG NO. M279-085-FZ30 SH 27

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3BJ86	F	M279	085	FZ30	027	00
ESTIMATE NO 00-104	SCALE 1:50		FILE			SHEET 27 OF	

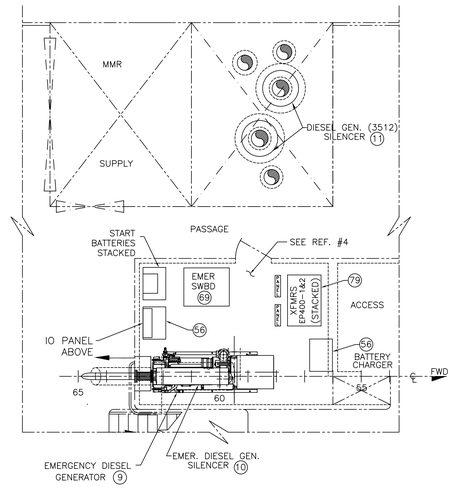
PLOT: 1:660



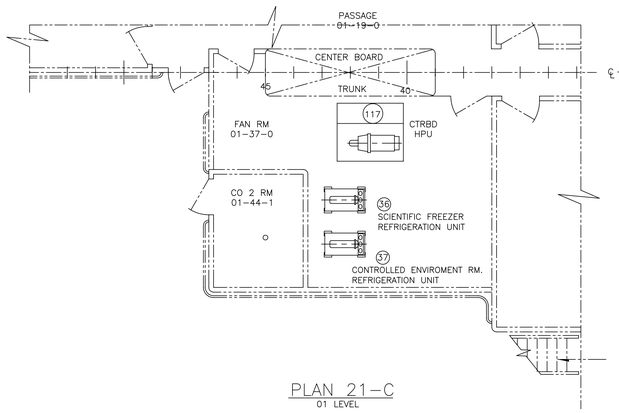
SECTION 22–D
FR 56 – LKG AFT



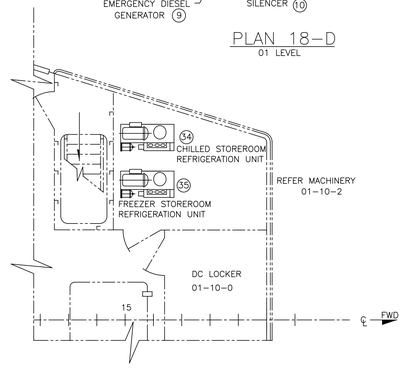
PLAN 19–D
MAIN DECK



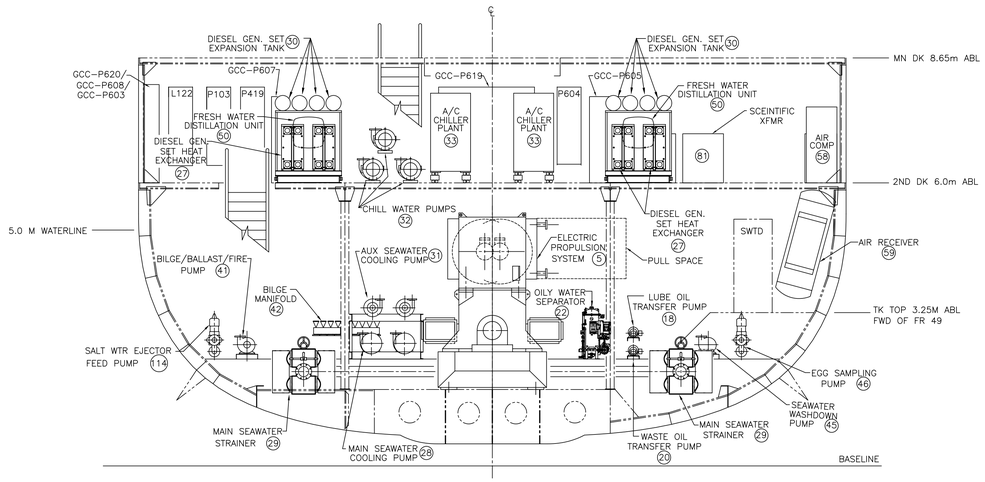
PLAN 18–D
01 LEVEL



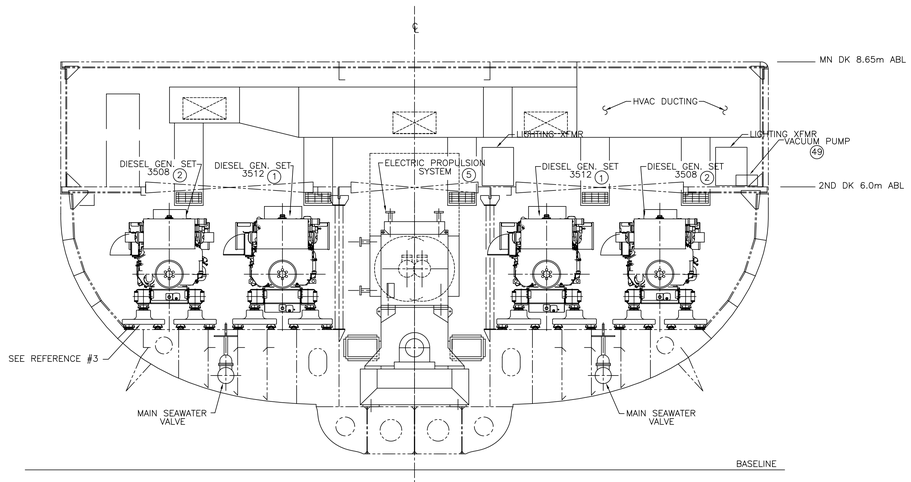
PLAN 21–C
01 LEVEL



PLAN 18–C
01 LEVEL



SECTION 22–A
FR 54 – LKG FWD



SECTION 19–A
FR 61 – LKG AFT

HULL NO	CAGE CODE	SIZE	JOB NO.	ITEM	DELIVERABLE	SHEET	REV
1944	3BJ86	F	M279	085	FZ30	028	00
ESTIMATE NO	SCALE						
00–104	1:50		FILE			SHEET 28 OF 28	

DWG NO. M279–085–FZ30 SHT 28

PLOT: 1:480